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Asicimbex Yan, Deng & Wei, a new genus with eight new species and four new combinations (Hymenoptera, Cimbicidae)

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Abstract

A new genus and eight new species of Cimbicinae from the East Asia are described: *Asicimbex* Yan, Deng & Wei **gen. nov.**, *A. concavicaputus* Yan & Wei **sp. nov.**, *A. dengi* Yan & Wei **sp. nov.**, *A. koreanus* Yan & Wei **sp. nov.**, *A. lii* Yan & Wei **sp. nov.**, *A. latistriatus* Yan, Deng & Wei **sp. nov.**, *A. maculotegularis* Yan & Wei **sp. nov.**, *A. nanjingensis* Yan & Wei **sp. nov.** and *A. shengi* Yan & Wei **sp. nov.** Four new combinations are proposed: *A. eous* (Semenov, 1935) **comb. nov.**, *A. elminus* (Li & Wu, 2003) **comb. nov.**, *A. ulmusvorus* (Yang, 1996) **comb. nov.** and *A. malaisei* (Gussakovskij, 1947) **comb. nov.**, all from *Agenocimbex*. The 12 known species of *Asicimbex* are separated into two species groups. *Asicimbex* stands between *Agenocimbex* Rohwer 1910 and *Cimbex* Olivier 1791. The differences between *Asicimbex* and *Cimbex*, *Asicimbex* and *Palaeocimbex* are discussed in detail. Descriptions, remarks, illustrations, a key to the known species of *Asicimbex* and a key to genera of Cimbicinae are provided. *A. malaisei* is confirmed as a valid species and recorded from China for the first time, with the female described for the first time. The distribution of the genus is also briefly discussed.

Keywords

Cimbicinae, distribution pattern, Eastern Asia, Sawflies, Tenthredinoidea

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Introduction

The Cimbicidae is a small family of the superfamily Tenthredinoidea with about 210 valid extant species belonging to 18 genera in the world (Taeger et al. 2010, 2018). Within China, 76 species and 14 genera have already been recorded (Yan et al. 2020b, 2020a; Cheng et al. 2021; Yan et al. 2021, 2022). The Cimbicinae is the most diverse subfamily and was divided into Cimbicini and Trichiosomini (Benson 1938; Abe et al. 1991). Yan et al. (Yan et al. 2019) described a new genus within Trichiosomini and also provided a key to extant Holarctic genera of Cimbicinae. Several genera (e.g. *Cimbex* and *Odontocimbex*) within Cimbicini are the largest true sawflies known (Vilhelmsen and Chatzaki 2021). Some of the species are economically important pests causing serious defoliation of woody plants (Gauld and Bolton 1988).

In the course of studying the systematics of Cimbicidae globally, we examined and found some undescribed species from eastern Asia that consistently share many characters, but whose genetic position is uncertain. Comparisons of those species with known genera of the family was performed, and we concluded that those species belong to an undescribed genus. Through detailed examination of some known species of *Agenocimbex*, we also concluded that four of them also belong to this new genus.

In this paper, we describe this new genus with eight new species. We also redescribe four newly combined species, all transferred from *Agenocimbex*.

Materials and methods

Specimens were examined with a Leica S8APO dissection microscope. Adult images were taken with a Nikon D700 digital camera and a series of images collated using Helicon Focus (HeliconSoft), while images of details were taken with a Leica Z16 APO/DFC550. A cylinder of semitransparent plastic was placed around the specimen to disperse the light, following the method proposed by Vilhelmsen (2019). The specimen must be sufficiently relaxed in a moist chamber before dissection. Dissected ovipositor valves, gonoforceps and penis valves were permanently mounted on slides in Arabic gum. Images were taken and composited automatically with a Nikon Ci-L/DS-Fi3. The series of images produced were focus-stacked using Helicon Focus (HeliconSoft, Kharkiv, Ukraine) and further processed with Adobe Photoshop CS 11.0.

The terminology of sawfly genitalia follows Ross (1945), and that of general morphology follows Viitasaari (2002). For a few terms (e.g. middle fovea and lateral fovea), we followed Takeuchi (1952). Abbreviations used are:

POL distance between the mesal edges of the lateral ocelli;
OOL distance between the eye and outer edge of lateral ocelli;
OCL distance between a lateral ocellus and the occipital carina or hind margin of the head.

Types of the new species and most non-type specimens of known species studied in this research are deposited in the Asian Sawfly Museum, Nanchang, China (**ASMN**), except those of *A. koreanus* which are deposited in the Department of Life Sciences, Yeungnam University, Gyeongsan, South Korea (**YNU**), the holotype and a paratype of *A. elminus* are deposited in the Insect Collection of the Forestry College, Northwest Agriculture and Forestry University, Xianyang, China (**NAFU**), a specimen of *A. eous* is deposited in the Natural History Museum, Stockholm, Sweden (**NHRS**), and some specimens of *A. ulmusvorus* are deposited in the National Museum of Nature and Science, Tokyo, Japan (**NMST**) and the Chinese Academy of Forestry, Beijing, China (**CAF**).

Results

Taxonomy

***Asicimbex* Yan, Deng & Wei, gen. nov.**
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Type species. *Agenocimbex ulmusvorus* Yang, 1996.

Diagnosis. The new genus is similar to *Agenocimbex* Rohwer 1910 and *Cimbex* Olivier 1791. *Asicimbex* differs from *Agenocimbex* by the following characters: a cross-vein present between 2A and 3A in hind wing (Fig. 1I); the malar space about 1.6–2.3× diameter of middle ocellus (Fig. 2A); the head dilated behind eyes in dorsal view (Fig. 2E); the clypeus clearly elevated in middle, apical breadth shorter than distance between anterior tentorial pits, anterior incision narrow and deep (Fig. 2A); posterior margin of the abdominal tergum 1 broadly and deeply incised (Fig. 1A, B); the ovipositor distinctly longer than middle tibia (Figs 5H, 7H); the lancet narrow and long, dorsal margins with dense and long hairs, with about 50 serrulae (Fig. 2M); the serrulae short and small, truncate apically and not distinctly protruding beyond cypsella (Fig. 2Q); the valviceps of penis valve very broad and transverse (Fig. 2U). *Asicimbex* differs from *Cimbex* by having the body quite slender (Fig. 1A, B), the lateral part of head weakly dilated behind eyes in dorsal view (Fig. 2E); the inner spur of hind tibia slender, and longer than apical breadth of tibia with pointed apex (Fig. 2I), the malar space short, about 1.6–2.3× diameter of middle ocellus (Fig. 2A); the anterior of fore wing with longitudinal smoky band (Fig. 1A, B); the serrulae small and remote to each other, apex truncate and not strongly protruding beyond cypsella (Fig. 2Q). *Asicimbex* differs from *Palaeocimbex* Semenov 1935 by having the body more slender, head weakly dilated behind eyes in dorsal view (Fig. 2E); clypeus broader than long and with a distinct and broad basin in upper third (Fig. 2A); the inner spur of hind tibia slender, and longer than apical breadth of tibia with pointed apex (Fig. 2I); the malar space short, about 1.6–2.3× diameter of middle ocellus (Fig. 2A); the valviceps of penis valve transverse (Fig. 2U); crepidium of lancet clearly below the lower third (Fig. 2M), the annular spines very long and dense with the cypsella densely pilose (Fig. 2Q).

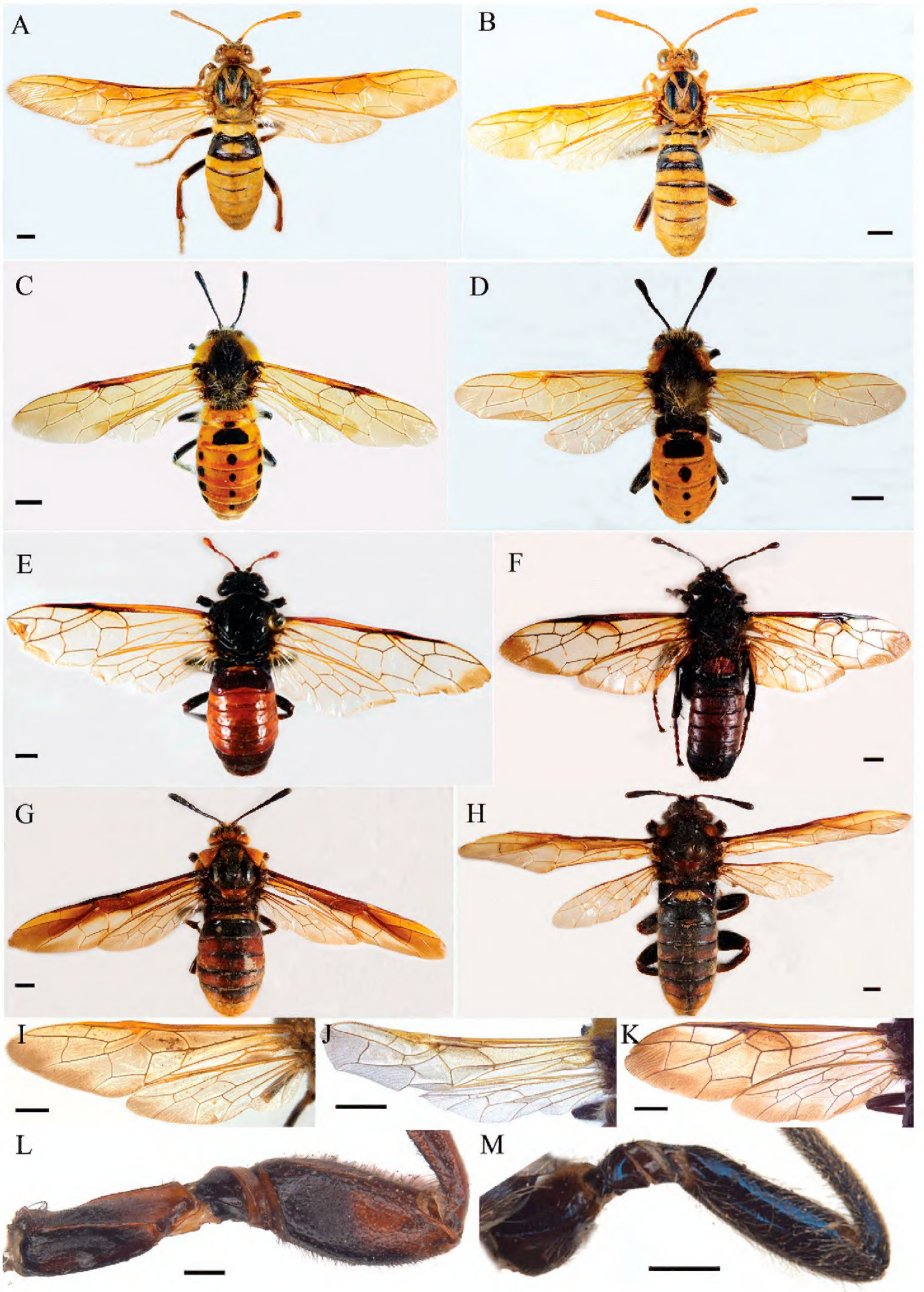

Figure 1. *Asicimbex* and closely related genus comparison diagram **A** *Asicimbex ulmusvorus* (female) in dorsal view **B** *Asicimbex ulmusvorus* (male) in dorsal view **C** *Agenocimbex maculatus* (female) in dorsal view **D** *Agenocimbex maculatus* (male) in dorsal view **E** *Cimbex femoratus* (female) in dorsal view **F** *Cimbex femoratus* (male) in dorsal view **G** *Palaeocimbex crataegum* (female) in dorsal view **H** *Palaeocimbex crataegum* (male) in dorsal view **I** wing of *Asicimbex elminus* **J** wing of *Agenocimbex maculatus* **K** wing of *Cimbex femoratus* **L** hind coxa and femur of *Asicimbex nanjingensis* (male) **M** hind coxa and femur of *Agenocimbex maculatus* (male). Scale bars: 2 mm (**A–H**); 1 mm (**I–M**).

Figure 2. Characters used to identify *Asicimbex* and closely related genus **A** head of *Asicimbex nanjingensis* in front view **B** head of *Agenocimbex maculatus* in front view **C** head of *Cimbex femoratus* in front view **D** head of *Palaeocimbex crataegum* in front view **E** head of *Asicimbex nanjingensis* in dorsal view **F** head of *Agenocimbex maculatus* in dorsal view **G** head of *Cimbex femoratus* in dorsal view **H** head of *Palaeocimbex crataegum* in dorsal view **I** inner spur of hind tibia (*Asicimbex nanjingensis*) **J** inner spur of hind tibia (*Agenocimbex maculatus*) **K** inner spur of hind tibia (*Cimbex femoratus*) **L** inner spur of hind tibia (*Palaeocimbex crataegum*) **M** lancet of *Asicimbex nanjingensis* **N** lancet of *Agenocimbex maculatus* **O** lancet of *Cimbex femoratus* **P** lancet of *Palaeocimbex crataegum* **Q** middle serrulae of *Asicimbex nanjingensis* **R** middle serrulae of *Agenocimbex maculatus* **S** middle serrulae of *Cimbex femoratus* **T** middle serrulae of *Palaeocimbex crataegum* **U** penis valve of *Asicimbex nanjingensis* **V** penis valve of *Agenocimbex maculatus* **W** penis valve of *Cimbex femoratus* **X** penis valve of *Palaeocimbex crataegum* **Y** claw of *Asicimbex elminus* **Z** claw of *Agenocimbex maculatus* **AA** claw of *Cimbex femoratus*. Scale bars: 1 mm (**A–H**); 500 μm (**I–L, M–P**); 200 μm (**Y–AA**); 50 μm (**Q–T**).

In *Agenocimbex* Rohwer 1910, the crossvein between anal veins absent in hind wing (Fig. 1J); the malar space narrower than diameter of ocellus (Fig. 2B); the head behind eyes very short and distinctly constricted in dorsal view (Fig. 2F); the clypeus flat, not elevated in middle, apical margins broader than distance between anterior tentorial pit,

anterior incision very shallow and flat (Fig. 2B); the posterior margin of the first abdominal tergum quite shallowly incised (Fig. 1C, D); the ovipositor sheath clearly shorter than middle tibia; the lancet triangular and short, dorsal margins without dense and long hairs, with about 25 serrulae (Fig. 2N); the serrulae convex, apex pointed and strongly protruding beyond cypsella (Fig. 2R); the penis valve narrow, long and triangular (Fig. 2V).

In *Cimbex* Olivier 1791 (excluding species of *Palaeocimbex*), the body very stout (Fig. 1E, F); the lateral part of head strongly dilated behind eyes in dorsal view (Fig. 2G); the apical spurs of hind tibia stout and shorter than apical breadth of tibia, apex blunt and membranous (Fig. 2K); the malar space very long, at least 3× diameter of middle ocellus (Fig. 2C); the fore wing without longitudinal smoky band (Fig. 1K); the serrulae convex and close to each other, apex round and strongly protruding beyond cypsella (Fig. 2S).

In *Palaeocimbex* Semenov 1935, the body very stout and strong (Fig. 1G, H); the lateral part of head strongly dilated behind eyes in dorsal view (Fig. 2H); clypeus as long as broad and without a distinct and broad basin in upper third (clypeus and supraclypeal area merged together) (Fig. 2D); the apical spurs of hind tibia stout and shorter than apical breadth of tibia, apex blunt and membranous (Fig. 2L); the malar space very long, at least 3× diameter of middle ocellus (Fig. 2D); the valviceps of penis valve clearly oblique (Fig. 2X); crepidium of lancet at middle of the lancet, the annular spines very short and less dense, with the cypsella largely naked (Fig. 2T).

Description. Female. Body medium to large-sized, without metallic luster, head and thorax with short hairs mixed with sparse long hairs.

Head. Clypeus distinctly elevated in middle, broader than distance between lower margins of eyes, anterior with small incision medially (Fig. 3C); labrum tongue-shaped, short and small, narrower than 1/4 breadth of clypeus; mandibles asymmetrical, short and broad, without basal petiole, inner tooth distinct (Fig. 10E); malar space about 1.6–2.3× diameter of middle ocellus (Fig. 3C); supraclypeal furrow absent but with shallow depressions; eyes large, inner margins feebly convergent downwards (Figs 3C, 6D); frontal area flat, without distinct frontal ridge; postocellar furrow distinct (Fig. 3D); postocellar area broader than long with weak middle furrow, lateral furrows distinct; head behind eyes weakly dilated and much shorter than eyes in dorsal view (Fig. 3D), without occipital carina. Antenna not longer than 2× head breadth, with 5 antennomeres before club, antennomere 4 almost as long as antennomere 5, club indistinctly segmented (Fig. 3F).

Thorax. Mesonotum with middle furrow and lateral furrows narrow but distinct (Fig. 3G); mesoscutellum elevated, anterior margin straight, roundly narrowed backwards; cenchri small. Anterior of forewing with a longitudinal smoky stripe (faded in dried specimens), anal cell with a short and straight crossvein at about basal 2/5; a crossvein present in hind wing between 2A and 3A (Fig. 1I).

Legs. Coxae and femora simple, denticle absent (Fig. 7H); inner apical spur of hind tibia slender, longer than apical breadth of tibia with pointed apex (Fig. 2I); claw large and distinctly bent, proximal teeth shorter than distal teeth (Fig. 2Y); tarsal pulvilli developed, close to each other (Fig. 3E).

Abdomen. Abdominal tergum 1 without middle carina (Fig. 3I), lateral carina present or absent, posterior margin with broad and deep incision, and a large membranous patch. Ovipositor sheath longer than middle tibia, apex clearly protruded beyond end of abdomen (Fig. 3J, L); lance long, usually weakly broadened beyond apex, apical incision and a hook distinct (Fig. 2M); lancet narrow and long, weakly tapering toward apex with 42–56 serrulae, serrulae small and remote to each other, hardly protruding beyond apex of cypsella, annular spines very long and dense, cypsella densely pilose (Fig. 2Q), crepidium of lancet clearly below the lower third of lancet (Fig. 2M).

Male. Structure similar to female except for following parts: anterior incision of clypeus more clear than female (Fig. 1B); subgenital plate slightly longer than broad, apical margin round; middle and hind coxae and femora elongated with carina; hind femora distinctly swollen, about twice as broad as trochanter (Fig. 1L).

Etymology. The generic name *Asicimbex* comes from the genus *Cimbex* with a prefix "*Asi*" referring to Asia, the distribution area of the new genus. Gender masculine.

Distribution. East and North China, Far East of Russia, Korea.

Discussion. In the key to tribes and genera of Cimbicinae, Gussakovskij (Gussakovskij 1947) keyed *Agenocimbex* within the taxa with a cross vein between hind anal veins. We guess that he did not examine specimens of *Agenocimbex jucunda* Mocsáry (now *A. maculatus*). Both *A. eous* and *A. malaisei*, the two other species of *Agenocimbex* that he examined, really had a cross vein between the hind anal veins and led him to think that the anal cross vein was present in all species of *Agenocimbex*, though *A. maculatus* has in fact no cross vein between the anal veins in the hind wing.

The color pattern of *Palaeocimbex amurensis* (Forsius, 1930) from Northeastern Asia is similar to some species of *Asicimbex*. Though the states of tibial spurs and serrulae are not known to the authors, its clypeus is as long as broad, the malar space is quite long and the forewing with smoky stripe covering cells 2Rs and 3Rs (Forsius 1930). These characters support it as a member of *Palaeocimbex* and close to *P. carinulata*.

Host plant. *Ulmus* spp. of Ulmaceae (Yang and Li 1996; Yang and Wu 1998; Wu et al. 2001).

The new genus and the 12 known species of the genus can be identified using the following keys.

Key to genera of Cimbicinae

1 Head small, about half as broad as thorax in female; malar space very long, longer than half the longest axis of eye; mandible almost straight and quite slender, without inner tooth; ventral side of hind femur with 1–2 rows of small denticles but without a subapical large denticle; claw simple without inner tooth; antenna with 8 antennomeres; serrulae long and strongly constricted at middle; larvae feed on *Acanthopanax* of Araliaceae ..... ***Odontocimbex*** **Malaise**

– Head large, at least three fourths breadth of thorax in female; malar space short or long, clearly shorter than half the longest axis of eye; mandible broad with

distinct inner teeth; ventral side of hind femur without a row of denticles, but sometimes with a large subapical denticle; claw simple or with an inner tooth; antenna with 5–7 antennomeres; serrulae short or long but never strongly constricted at middle; larvae not feeding on *Acanthopanax* of Araliaceae **2**

2 Claw with a distinct inner tooth; mandible short and broad without a distinct basal stalk, apical tooth strongly bent; clypeus subtriangular and more or less convex, about as long as broad and clearly broader than lower distance between eyes, extending upward and merging with supraclypeal area, anterior margin broadly extending forward with a narrow anterior incision; labrum small, less than 1/3 breadth of clypeus; valviceps of penis valve almost transverse (except for *Agenocimbex*), dorsal margin round, not strongly protruding at middle **3**

– Claw simple without inner tooth; mandible elongate with a distinct basal stalk, apical tooth hardly bent; clypeus broadly transverse, quite flat, much broader than long, anterior margin broadly incised, or clypeus narrower than lower distance between eyes; labrum usually quite large, not less than 1/3 breadth of clypeus (except for *Praia* about one fourth breadth of clypeus); valviceps of penis valve strongly oblique, dorsal margin distinctly protruding at about middle..... **6**

3 Jugum region in hind wing without cross vein; malar space narrower than diameter of median ocellus (Fig. 1J); clypeus feebly convex (Fig. 2B); head narrowed behind eyes in dorsal view (Fig. 2F); posterior margin of the first abdominal tergum quite shallowly incised (Fig. 2C); penis valve with a long and narrow apical process (Fig. 2V); lancet short, broad at base and gradually tapering toward apex (Fig. 2N); serrulae slender, strongly protruding above cypsella (Fig. 2R) ..... ***Agenocimbex* Rohwer**

– Jugum region in hind wing with a cross vein; malar space longer than 1.5 times diameter of median ocellus; clypeus distinctly convex; head dilated behind eyes in dorsal view; posterior margin of first abdominal tergum quite deeply incised; penis valve without apical process, dorsal margin of valviceps subtriangularly convex; lancet long and slender, not broadened at base and feebly tapering toward apex; serrulae short and broad, feebly protruding above cypsella **4**

4 Tibial spur slender and acute at apex (Fig. 2I); malar space 1.6–2.3 times diameter of median ocellus; head weakly dilated behind eyes in dorsal view (Fig. 2E); serrulae small, truncate at apex (Fig. 2M), distance between serrulae much broader than breadth of a serrula (Fig. 2Q); clypeus and supraclypeal area not entirely merging together and with a shallow depression between them; anterior of fore wing with a broad longitudinal smoky stripe .... ***Asicimbex* Yan, Deng & Wei, gen. nov.**

– Tibial spur stout and blunt at apex with apical membrane; malar space not less than 3 times diameter of median ocellus; head strongly dilated behind eyes in dorsal view; serrulae large or small, round at apex, distance between serrulae shorter or broader than breadth of a serrula..... **5**

5 Clypeus and supraclypeal area entirely merging together and without depression between them (Fig. 2D); distance between antennal toruli and posterior margin of head clearly shorter than distance between toruli and anterior margin of clypeus (Fig. 2D); postocellar area much broader than long (Fig. 2H); distance between cenchri about 5 times as long as breadth of a cenchrus; serrulae quite small, distance between serrulae more than 1.5 times breadth of a serrula (Fig. 2T); anterior of fore wing with a distinct longitudinal smoky stripe (Fig. 1G) ..... ***Palaeocimbex*** **Semenov**

– Clypeus and supraclypeal area not entirely merging together and with a shallow depression between them (Fig. 2C); distance between antennal toruli and posterior margin of head about as long as distance between toruli and anterior margin of clypeus (Fig. 2C); postocellar area about as long as broad or slightly broader than long (Fig. 2G); distance between cenchri about 2–3 times as long as breadth of a cenchrus; serrulae quite large, distance between serrulae narrower than breadth of a serrula (Fig. 2S); anterior of fore wing without a distinct longitudinal smoky stripe (Fig. 1E) ..... ***Cimbex*** **Olivier**

6 Clypeus clearly narrower than shortest distance between eyes and separated from supraclypeal area with a shallow but distinct furrow; labrum small and narrow, without lateral carina, about one fourth breadth of clypeus; anal cell in fore wing with a short petiole at basal third; head weakly enlarged behind eyes in dorsal view; inner apical spur of hind tibia very short, about 0.5–0.6 times apical breadth of tibia [wings hyaline without longitudinal smoky stripe; first pulvillus of hind tarsus longer than half length of metabasitarsus] ..... ***Praia*** **Andre**

– Clypeus clearly broader than shortest distance between eyes; labrum medium sized or large, with lateral carina, at least one third breadth of clypeus; anal cell in fore wing usually with an erect cross vein at basal third to two fifths; head distinctly enlarged behind eyes in dorsal view; inner apical spur of hind tibia long, about 0.8–1.1 times apical breadth of tibia **7**

7 Ventral side of middle and hind femur with 1 distinct denticle near apex; clypeus and labrum always black; labrum broad, weakly narrowed toward base and strongly narrowed toward apex..... **8**

– Ventral side of femur without denticle; clypeus and labrum usually yellowish white or yellowish brown (*Labriocimbex* and 1 species of *Leptocimbex* has black labrum); labrum broad, distinctly narrowed toward base and broadened toward apex, or labrum narrow and broadened toward base..... **9**

8 Head small, less than 0.75 times as broad as thorax in dorsal view; ventral side of hind femur with two distinct longitudinal carinae, outer carina higher than inner one; fore wing with a distinct infuscate macula within cell 1M; body hairs very dense; penis valve with a very broad and strongly sclerotized dorsal lobe..... ***Asitrichiosoma*** **Malaise**

– Head large, more than 0.75 times as broad as thorax in dorsal view; ventral side of hind femur without two longitudinal carinae; fore wing without a distinct infuscate macula within cell 1M; body hairs sparse; penis valve with a narrow and weakly sclerotized dorsal lobe ..... ***Trichiosoma*** **Leach**

9 Labrum broadest at base and distinctly narrowed toward apex; clypeus distinctly separated from supraclypeal area by a shallow but distinct transversal furrow, clypeus and labrum entirely black, anterior of clypeus strongly thickened with perpendicular anterior face at middle [tarsal pulvilli large, 1st and 2nd pulvilli nearly touching each other, first pulvillus longer than half length of basitarsus; antennae with 6 antennomeres; basal several abdominal terga with long hairs; first tergum without lateral carina; wings hyaline without longitudinal smoky stripe, fore wing with apical anal cell 2 times as long as basal anal cell ..... ***Labriocimbex*** **Yan & Wei**

– Labrum narrowed toward base and broadened toward apex; clypeus merging with supraclypeal area without distinct transversal furrow; clypeus and labrum usually pale (except one species of *Leptocimbex*); anterior of clypeus flat or thickened, anterior face not appendiculate..... **10**

10 Antenna with 5 antennomeres, club of antennae not segmented; head and thorax with dense and long hairs; abdominal tergum 1 without lateral carina; tarsal pulvilli large, 1st and 2nd pulvilli nearly touching each other, first pulvillus longer than half length of basitarsus; wings hyaline without longitudinal smoky stripe, length of apical anal cell of forewing about 1.4 times basal anal cell; middle of clypeus thickened with narrow anterior face leaning inward... ..... ***Pseudoclavellaria*** **Schulz**

– Antenna with 7 antennomeres, club of antennae segmented; head and thorax with sparse long hairs; abdominal tergum 1 at least with distinct lateral carina at basal 1/2; tarsal pulvilli short and small, separated each other, distance between basal 2 pulvilli not shorter than length of a pulvillus, first pulvillus much shorter than half length of basitarsus; fore wing with distinct longitudinal smoky stripe, apical anal cell about 2 times length of basal anal cell; anterior of clypeus flattened toward apex and without oblique apical surface ..... ***Leptocimbex*** **Semenov**

Key to species of *Asicimbex* Yan, Deng & Wei, gen. nov.

1 Postocellar area not more than 1.6× broader than long; upper half of mesepisternum densely and distinctly punctured, punctures well-defined (Figs 3B, 8K, 12I); abdomen dark brown, basal margin of terga black, without yellow brown macula except for the 4th tergum; middle and hind tibiae blackish brown to dark brown; lancet with 42–46 serrulae, middle serrulae distinctly narrowed toward apex, each side with about 5 small subbasal teeth; lance short and broad, total length of annuli 3.6–3.9× the height of annulus 13, first annulus 2.2–2.7× as high as length; basal breadth of the middle process of female sternum 7 about 1/3 breadth of the sternum; distance between male middle coxae not shorter than basal breadth of coxa. *A. latistriatus* group.... **2**

– Postocellar area not less than 2× as broad as long; upper half of mesepisternum faintly (Fig. 13H) or shallowly punctured, sometimes mixed with

rugose sculptures (Figs 6H, 7F); abdomen largely black at base and with distinct yellow brown maculae at middle, 5th tergum always largely yellow brown; middle and hind tibiae orange or yellowish brown; lancet with 47–56 serrulae, middle serrulae usually weakly narrowed toward apex, each side with 3–4 large subbasal teeth; lance slender, total length of annuli 4.8–6× the height of annulus 13, first annulus 1.5–2.1× as high as length; basal breadth of the middle process of female sternum 7 about 1/3 or 1/6 breadth of the sternum; distance between male middle coxae shorter than basal breadth of coxa. *A. eous* group.....**4**

2 Postocellar area 1.6× broader than long; lateral carina of abdominal tergum 1 distinct (Fig. 3I), hind corner pointed and distinctly protruded (Figs 3I, 12L); antennomere 3 as long as or shorter than longest axis of eye; lancet with 42 serrulae **3**

– Postocellar area 1.2–1.3× broader than long; abdominal tergum 1 without lateral carina, hind corner roundish (Fig. 8O); antennomere 3 clearly longer than longest axis of eye; lancet with 46 serrulae. China (Henan).....
.....***A. latistriatus* Yan, Deng & Wei, sp. nov.**

3 Antennomere 3 shorter than longest axis of eye; malar space as long as basal 2 antennomeres together; anterior smoky stripe of fore wing not extending to apex; head with dorsal black macula touching eyes; posterior of postocellar area distinctly concave at middle; first annulus of lance 2.7× as high as long. China (Henan) .....***A. concavicaputus* Yan & Wei, sp. nov.**

– Antennomere 3 as long as longest axis of eye; malar space shorter than basal 2 antennomeres together; anterior smoky stripe of fore wing extending to apex; head with dorsal black macula remote from eyes; posterior of postocellar area not concave at middle; first annulus of lance 2.2× as high as long. China (Jiangsu) .....***A. nanjingensis* Yan & Wei, sp. nov.**

4 First abdominal tergum largely and mesepisternum above oblique carina entirely yellow brown; second abdominal tergum black with a quadrate middle yellow macula; abdomen beyond third tergum entirely yellow brown; mesonotum yellow brown with a large black macula on each lobe; antenna 1.8× as long as head breadth, last antennomere 1.7× as broad as apex of antennomere 3; first abdominal tergum largely smooth and shiny, middle part with some punctures. China (Anhui, Hubei, Henan).....
.....***A. ulmusvorus* (Yang, 1996) comb. nov.**

– First abdominal tergum largely and mesepisternum above oblique carina partly black; second abdominal tergum without a quadrate middle yellow macula; abdominal tergum 3 largely or entirely black, tergum 4 with middle black macula, lateral of terga 6–8 dark brown to black brown; mesonotum mainly black except for mesoscutellum, at most with small pale macula at about middle; antenna 1.5–1.7× as long as head breadth, last antennomere 2–2.1× as broad as apex of antennomere 3; first abdominal tergum distinctly punctured and microsculptured, at most with a small lateral smooth patch.....**5**

5 Lateral margins of abdominal tergum 1 round, without distinct lateral carina (Fig. 5G, H), lateral area of tergum 1 with a smooth and shiny patch; mesepisternum with an obscure middle transverse carina (Fig. 5B); yellow maculae on terga 3–5 gradually elongated, middle pale macula on terga 6 and 7 much shorter than lateral blacking part; fore wing with a distinct smoky apical macula (Fig. 5A); mesoscutal lateral lobes with small middle pale macula (Fig. 5F). China (Gansu, Shanxi) ..... ***A. elminus*** **(Li & Wu, 2003) comb. nov.**

– Lateral margins of abdominal tergum 1 with distinct lateral carina (Fig. 10G, H), tergum 1 without smooth and shiny patch; mesepisternum with a distinct middle transverse carina (Fig. 10F); middle pale macula on terga 6 and 7 not shorter than lateral blacking part; fore wing with smoky apical macula very narrow (Fig. 9A) or absent (Fig. 10A); mesoscutal lateral lobes with long middle pale macula (Fig. 9D) or entirely black **6**

6 Middle process of female sternum 7 narrow triangular, basal breadth much shorter than height and about 1/6 breadth of the sternum; black macula on dorsum of head subquadrate, covering frontal ridges, or mesepisternum entirely black; mesoscutellum with or without middle furrow 7

– Middle process of female sternum 7 broad triangular, basal breadth about as long as height and about 1/3 breadth of the sternum; black macula on dorsum of head not quadrate, frontal ridges always yellowish brown; at least posterior half of mesepisternum pale; mesoscutellum roundly elevated without middle furrow..... **9**

7 Black macula on dorsum of head subquadrate, covering entire frontal ridges; at least posterior half of mesepisternum yellowish brown; apical margin of fore wing without smoky macula; mesoscutellum with broad and deep middle furrow; serrulae slightly narrowed toward apex, distance between middle serrulae about 2.2–2.6× breadth of serrula; subapical part of lance clearly broadened; lancet with 51–55 serrulae..... **8**

– Black macula on dorsum of head not subquadrate, frontal ridges pale; mesepisternum entirely black; apical margin of fore wing with narrow smoky macula; mesoscutellum roundly elevated without middle furrow; serrulae distinctly narrowed toward apex, distance between middle serrulae about 1.5× breadth of serrula; subapical part of lance not broadened; lancet with 48 serrulae. China (Liaoning) ..... ***A. dengi*** **Yan & Wei, sp. nov.**

8 Tegula largely black; lateral side of first abdominal tergum yellowish brown; 4th abdominal tergum with a small middle black macula (Fig. 10G); middle and hind tibiae reddish brown; first abdominal tergum with middle part distinctly produced (Fig. 10G); lancet with 51 serrulae, distance between middle serrulae 2.2× breadth of a serrula. China (Liaoning) ..... ***A. maculotegularis*** **Yan & Wei, sp. nov.**

– Tegula entirely yellow brown; lateral side of first abdominal tergum black; 4th abdominal tergum with a large middle black macula (Fig. 6M); middle and hind tibiae yellowish brown; middle of first abdominal tergum not produced

(Fig. 6M); lancet with 55 serrulae, distance between middle serrulae 2.6× breadth of a serrula. Russia (Ussuri)..... ***A. eous* (Semenov, 1935) comb. nov.**

9 Apical club of antenna clearly shorter than antennomere 3 and about 1.15× as long as antennomeres 4 and 5 together; mesepisternum above carina almost entirely reddish brown, surface almost smooth (Fig. 13H); lancet with 51 serrulae, serrula small, clearly narrowed toward apex, distance between middle serrulae more than 2× as broad as a serrula. China (Liaoning)..... .....***A. shengi* Yan & Wei, sp. nov.**

– Apical club of antenna not shorter than antennomere 3 and at least 1.37× as long as antennomeres 4 and 5 together; mesepisternum above carina at least black in anterior third, remaining part yellowish brown or dark brown, surface not smooth, distinctly punctured or microsculptured (Figs 7F, 9G, 11B); lancet with 47 or 55–56 serrulae, serrula large, feebly narrowed toward apex..... **10**

10 Lateral sides of mesoscutal middle lobe and inner sides of mesoscutal lateral lobes with distinct pale stripes, tegula entirely yellow brown; pale lateral stripe and pale posterior margin of first abdominal tergum connected in front of the roundish lateral black macula (Fig. 9E); third tergum with a distinct lateral pale macula; cenchri broad, distance between cenchri 2.2× longest axis of a cenchrus; lancet with 47 serrulae, distance between middle serrulae narrower than 2× breadth of a serrula; fore wing with a narrow apical smoky macula. China (Liaoning) ..... ***A. lii* Yan & Wei, sp. nov.**

– Mesoscutal middle lobe and lateral lobes entirely black, tegula largely black; first abdominal tergum black with a narrow pale lateral stripe, without isolated black macula (Figs 7G, 11G); third tergum entirely black; cenchri slender, distance between cenchri 2.6–2.8× longest axis of a cenchrus; lancet with 48 or 56 serrulae, distance between middle serrulae not narrower than 2× breadth of a serrula **11**

11 Apical club of antenna longer than antennomere 3, about 1.6× as long as antennomeres 4 and 5 together; cenchrus very narrow, about 4× as long as broad; top of mesoscutellum densely punctured; upper half of mesepisternum densely punctured mixed with wrinkles; lateral carina of first abdominal tergum roundly curved, anterior corner not angulate (Fig. 7G); black macula on dorsum of head not subquadrate, with three processes (Fig. 7E); lancet with 56 serrulae, distance between middle serrulae broader than 2× breadth of a serrula. South Korea..... ***A. koreanus* Yan & Wei, sp. nov.**

– Apical club of antenna as long as antennomere 3, about 1.3× as long as antennomeres 4 and 5 together; cenchrus normal, about 3× as long as broad; top of mesoscutellum sparsely punctured; upper half of mesepisternum sparsely punctured, wrinkles indistinct; lateral carina of first abdominal tergum roundly curved only in posterior half, anterior corner angulate (Fig. 11G); black macula on dorsum of head subquadrate (Fig. 11E); lancet with 48 serrulae, distance between middle serrulae about 2× breadth of a serrula. China (Heilongjiang); Russia (Ussuri) ..... ***A. malaisei* (Gussakovskij, 1947) comb. nov.**

Description of species

***Asicimbex concavicaputus* Yan & Wei, sp. nov.**
https://zoobank.org/E19A7C45-B2E9-4B16-A0F8-BE688173A5C0
Fig. 3

Material examined. ***Holotype*** female, China: Henan Province, Lushi County, Yuhuangshan National Forest Park, 1720 m, 33°44.46'N, 110°49.900'E, 30 April 2019, leg. Shuxin Liu, Yiwen Zhang, (ASMN).

Diagnosis. The species is similar to *A. nanjingensis* Yan & Wei sp. nov., but it differs from the latter in the following characters: the antennomere 3 shorter than longest axis of eye; malar space as long as the basal 2 antennomeres together; the anterior smoky stripe of the fore wing not extending to apex; head with the dorsal black macula broadly touching eyes laterally; posterior of the postocellar area distinctly concave at the middle; the fourth abdominal tergum yellowish brown; the bottom of the posterior incision of the first tergum broadly truncate; the dorsum of mesoscutellum sparsely punctured, the surface smooth; and the first annulus of lance 2.7× as high as long.

Description. Holotype, female. Body length 16 mm (Fig. 3A).

Color. Head dark yellowish brown (Fig. 3C), dorsum with a large quadrate black macula covering inner orbit, frontal area and ocellar area (Fig. 3D), antenna dark reddish brown (Fig. 3F); thorax black (Fig. 3G), posterior margin of pronotum and anepimeron, tegula, mesoscutellum and lateral carina, small macula on posterior of mesepisternum, lower margin of metepisternum and metepimeron largely orange brown (Fig. 3B); lateral carina of metanotum and cenchri yellowish brown; abdomen brownish black, tergum 4 except for narrow middle macula yellowish brown, lateral margins of tergum 1, terga 5–10 and sternum 7 brown (Fig. 3I, J). Wings largely infuscate, cells 2Rs, 3Rs, 2M, 3M, 2Cu and 2A largely hyaline, veins largely brown to pale brown (Fig. 3A); legs reddish brown, middle and hind coxae, all trochanters and femora black, tibiae blackish brown, tarsi paler toward apex (Fig. 3E).

Head. Clypeus smooth with luster, anterior margin with broad and arcuate incision (Fig. 3C); malar space about 2.3× diameter of middle ocellus; postocellar area 1.6× as broad as long, clearly concave in middle at posterior margin, lateral furrows narrow weakly divergent; POL: OOL: OCL = 5: 6: 8; head behind eyes distinctly enlarged (Fig. 3D). Antenna about 1.5× head breadth (Fig. 3F), apical club 1.1× as long as antennomere 3, with the widest breadth about 2.6× apical breadth of antennomere 3, antennomere 3 slightly shorter than longest axis of eye.

Thorax. Mesonotum with dense and deep punctures, punctures on mesepisternum above carina and elevated parts of mesepimeron dense and deep, clearly defined, interspace between punctures almost smooth, concave area of mesepimeron microsculptured, punctures on ventral side of mesepisternum sparse (Fig. 3B); mesoscutellum roundly elevated, without middle furrow; oblique middle carina on mesepisternum clear but not sharp; distance between cenchri about 3× longest axis of a cenchrus (Fig. 3G).

Figure 3. *Asicimbex concavicaputus* Yan & Wei sp. nov., holotype, female **A** female adult in dorsal view **B** mesopleuron and metapleuron **C** head in front view **D** head in dorsal view **E** leg **F** antenna **G** thoracic notum **H** middle serrulae **I** abdominal terga **J** lateral side of abdomen **K** lancet **L** ovipositor sheath in ventral view **M** claw.

Abdomen. Abdominal tergum 1 distinctly punctured and microsculptured, with very weak luster, other terga finely and densely microsculptured, almost matte; lateral carina of tergum 1 distinct, anterior corner round, posterior corner weakly produced; posterior margin of tergum 1 with broad and deep incision, bottom almost truncate (Fig. 3I); middle process of sternum 7 broad and triangular, basal breadth about 1/3 breadth of sternite 7; lance short and broad, subapical annuli feebly broadened, total length of annuli 3.6× height of 13th annulus, first annulus 2.7× as high as broad (Fig. 3K); lancet with 42 serrulae (Fig. 3K), middle serrulae small, distinctly narrowed toward blunt apex, each side with about 5 minute subbasal teeth, distance between serrulae about 2.3× basal breadth of a serrula (Fig. 3H).

Male. Unknown.

Distribution. China (Henan).

Host plant. Unknown.

Etymology. The specific epithet of the species name is a combination of the Latin word "*concavi-*" and "*-caputus*", referring to the posteriorly concave postocellar area at middle.

Asicimbex dengi Yan & Wei, sp. nov.

https://zoobank.org/4E5EC523-7D1B-485C-A818-D9268824CD4C

Fig. 4

Material examined. ***Holotype*** female, China: Liaoning Province, Shenyang City, Dongling 23 May 1989, leg. Meicai Wei (ASMN).

Diagnosis. This species is quite similar to *A. eous* (Semenov, 1935) and *A. maculotegularis* Yan & Wei sp. nov., but differs from the latter two species by the following characters: the black macula on dorsum of head small and not subquadrate, frontal ridges pale; mesepisternum entirely black; the apical margin of fore wing with narrow smoky macula; mesoscutellum roundly elevated without middle furrow; lancet with 48 serrulae, serrulae distinctly narrowed toward apex, distance between middle serrulae about 1.5× breadth of serrula; lance slender, the subapical part not broadened, and the first annulus 2.1× as high as long.

Description. Holotype, female. Body length 21 mm (Fig. 4A).

Color. Head dark yellowish brown, frontal area with a M-shaped narrow black maculae, clypeus and mouthparts largely yellowish brown (Fig. 4E), antenna reddish brown (Fig. 4D); thorax largely black, narrow posterior and lateral margins of pronotum, tegula, mesoscutellum, dorsum of metascutellum, narrow posterior margin of mesopleuron yellowish brown (Fig. 4G, H); abdomen dark yellowish brown, terga 1–2 entirely, tergum 3 except for lateral small macula, subtriangular middle macula on tergum 4 and narrow basal margin of tergum 5 black, lateral macula on terga 7–8 and most of ventral fold of terga 2–6 blackish brown (Fig. 4A, L), pale maculae at middle of terga 6–8 3× broader than long. Wings smoky, outer margin of fore wing with a narrow and weak smoky macula (Fig. 4C), cells 3Rs, 2M, 3M, 1Cu, 2Cu and A largely

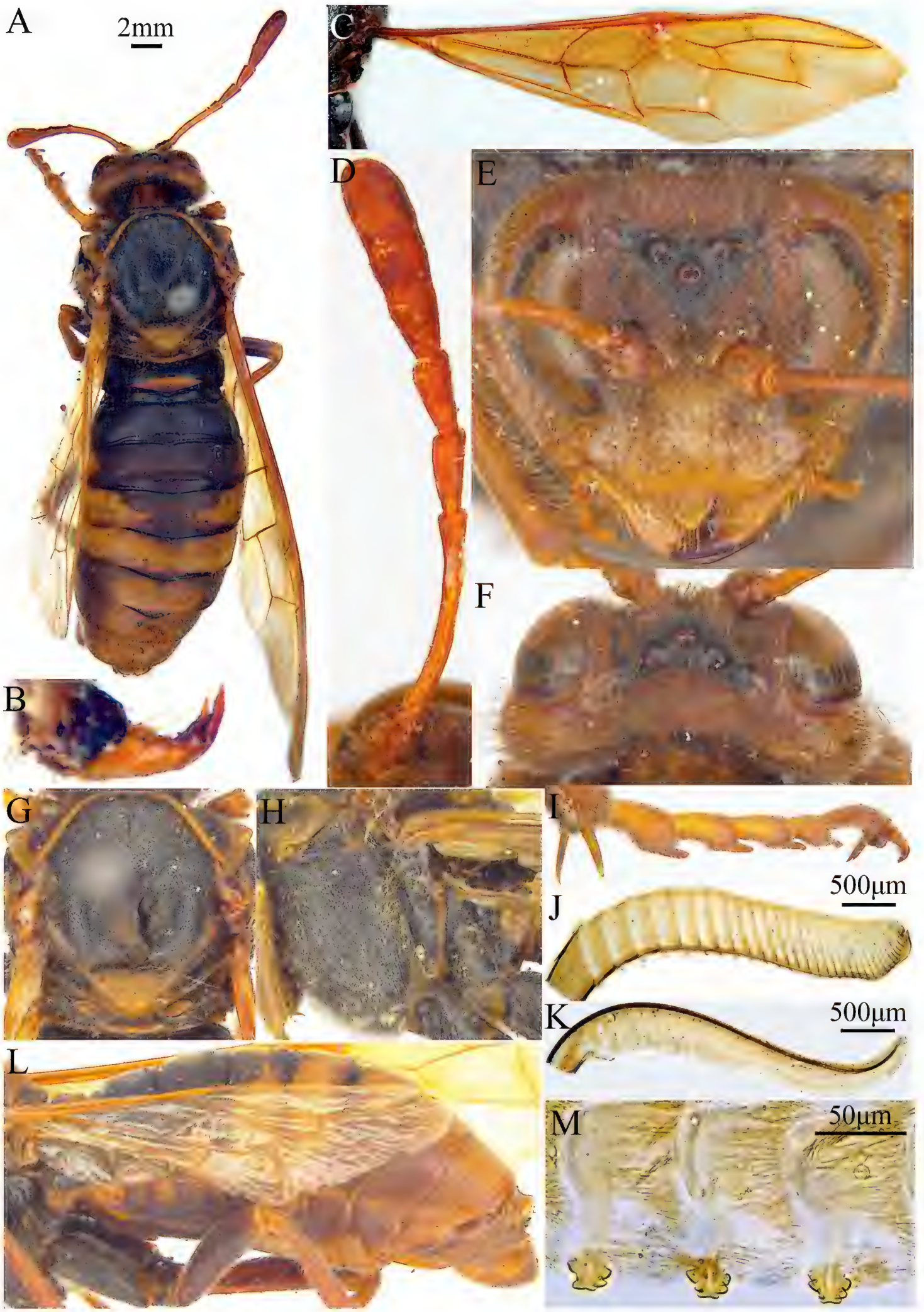

Figure 4. *Asicimbex dengi* Yan & Wei sp. nov., holotype, female **A** female adult in dorsal view **B** claw **C** fore wing **D** antenna **E** head in front view **F** head in dorsal view **G** thoracic notum **H** mesopleuron and metapleuron **I** hind tarsus **J** lance **K** lancet **L** lateral side of abdomen **M** middle serrulae.

subhyaline, veins and pterostigma pale brow; legs largely yellowish brown, coxae with black longitudinal stripes, trochanters and femora largely blackish brown.

Head. Dorsum of head with indistinct and minute punctures, clypeus largely smooth, with strong luster (Fig. 4E, F). Clypeus elevated, anterior margin narrowly and roundly incised; labrum small and triangular; malar space 1.7× diameter of middle ocellus (Fig. 4E); postocellar area 2.0× broader than long, middle furrow weak; lateral furrows distinct, slightly divergent backwards; POL: OOL: OCL = 3 : 4: 6; eyes behind head distinctly enlarged (Fig. 4F). Antenna 1.6× head breadth, club broad and long, with widest breadth 2.2× apical breadth of antennomere 3, about 1.1× as long as antennomere 3, antennomere 3 as long as longest axis of eye.

Thorax. Punctures on mesoscutal middle and lateral lobes small and dense, surface weakly microsculptured; scutellum roundly elevated without middle furrow, punctures minute and sparse, top area smooth; distance between inner margin of cenchri 2.1× longest axis of a cenchrus (Fig. 4G); mesopleuron with a sharp oblique carina, punctures above carina dense and small, interspaces between punctures distinctly microsculptures (Fig. 4H); punctures on area below carina sparser.

Abdomen. Abdominal tergum 1 with minute punctures and microsculptured, other terga finely and densely microsculptured. Tergum 1 with obtuse and roundly curved lateral carina, posterior incision broad and not very deep, bottom round, middle depth about half the length of tergum (Fig. 4A); middle process of sternum 7 broad and triangular, basal breadth about 1/3 breadth of sternite 7; apical margin of ovipositor sheath obliquely truncate in lateral view, lower margin round (Fig. 4L); lance long and slender, subapical annuli not broadened, total length of annuli 5× height of 13th annulus, first annulus 2.1× as high as broad (Fig. 4J); lancet with 48 serrulae (Fig. 4K), middle serrulae weakly narrowed toward truncate apex, each side with 3–4 large subbasal teeth, distance between middle serrulae 1.5× basal breadth of serrulae (Fig. 4M).

Male. Unknown.

Distribution. China (Liaoning).

Host plant. Unknown.

***Asicimbex elminus* (Li & Wu, 2003) comb. nov.**

Fig. 5

Agenocimbex elmina Li & Wu, 2003, 39 (1): 103–104.

Material examined. ***Holotype,*** female, China: Gansu Province, Tianshui City, 2 May 2000, leg. Xingyu Wu (NAFU). ***Paratypes,*** 1 female, same data as holotype (NAFU); 2 females, same data as holotype (ASMN).

Diagnosis. This species is remote from other known species of the genus. It can be easily recognized by the following characters: the lateral margins of abdominal tergum 1 round, without distinct lateral carina (Fig. 5G, H), lateral area of tergum 1 with a distinct smooth and shiny patch; mesepisternum with an obscure middle transverse carina (Fig. 5B); the abdominal terga 3–5 with gradually elongated shiny yellow

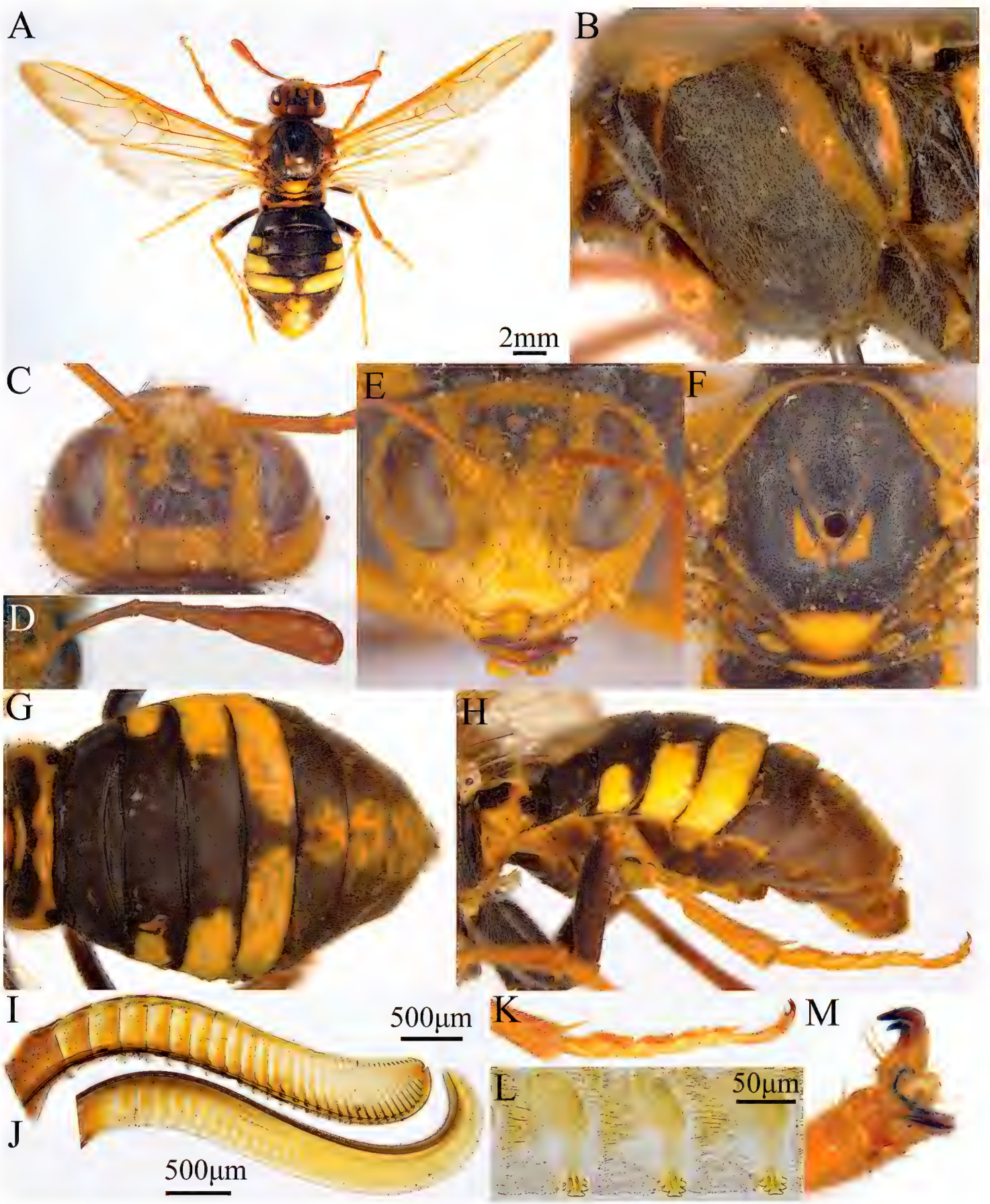

Figure 5. *Asicimbex elminus* (Li & Wu, 2003) comb. nov., paratype, female **A** female adult in dorsal view **B** mesopleuron and metapleuron **C** head in dorsal view **D** antenna **E** head in front view **F** thoracic notum **G** abdominal terga **H** lateral side of abdomen **I** lance **J** lancet **K** hind tarsus **L** middle serrulae **M** claw.

macula, the middle pale maculae on terga 6 and 7 less than 2× as broad as long and much shorter than lateral blackened part; fore wing with a broad and distinct smoky apical macula; the mesoscutal middle and lateral lobes with small pale maculae, antennomere 3 distinctly shorter than longest axis of eyes.

Description. Holotype, female. Body length 19 mm (Fig. 5A).

Color. Head dark yellowish brown, lateral fovea, bottom of middle fovea, middle of frontal area and ocellar area black, clypeus yellowish brown (Fig. 5C, E); antennal flagellum reddish brown (Fig. 5D); thorax black (Fig. 5F), pronotum largely, tegula, narrow margins of mesoscutal middle lobe, small triangular maculae on inner side of lateral lobes, mesoscutellum and dorsum of metascutellum, posterior stripe of mesepisternum and of mesepimeron yellowish brown (Fig. 5B, F); abdomen black, both sides and connected posterior margin of abdominal tergum 1, a round macula on middle of tergum 6, a quadrate macula on terga 7 and 8 yellowish brown, a small macula on lateral of tergum 3, more than 1/4 of tergum 4 laterally, tergum 5 except for small middle macula, sides of abdominal sternites 2–6 bright yellow, middle of abdominal sternite blackish brown, terga 9–10 and ovipositor sheath reddish brown (Fig. 5G, H). Wings infuscate in anterior half and broad apical margin, veins and pterostigma yellowish brown, cells 2M, basal half of 3M, 1Cu, 2Cu, 2A largely and hind wing except for apical margin subhyaline (Fig. 5A). Legs yellowish brown, middle and hind coxae, trochanter and dorsal parts of femora blackish brown (Fig. 5H).

Head. Dorsum of head with fine punctures, clypeus smooth (Fig. 5E); clypeus elevated, anterior margin with a roundish incision; labrum small and roundish at apex, longer than broad; malar space 2.3× diameter of middle ocellus (Fig. 5E); postocellar area slightly elevated, 2× broader than long, middle furrow weak; lateral furrows distinct, parallel to each other; POL: OOL: OCL = 4: 5: 6; head behind eyes weakly enlarged (Fig. 5C). Antenna 1.5× head breadth, club 1.1× length of antennomere 3, widest breadth 2.5× apical breadth of antennomere 3 (Fig. 5D); antennomere 3 distinctly shorter than longest axis of eyes (32: 39).

Thorax. Mesonotum densely punctured, with feeble luster; punctures on metapleuron above carina dense and small, interspace between punctures microsculptured, lower part of mesosternum densely punctured, oblique carina obtuse (Fig. 5B); mesoscutellum strongly elevated, without furrow, dorsum sparely punctured; distance between inner margin of cenchri 2.5× the longest axis of a cenchrus; metascutellum not elevated in middle (Fig. 5F).

Abdomen. Abdominal tergum 1 with minute punctures and microsculptures, shiny, both sides smooth; other terga finely and densely microsculptured, with feeble luster (Fig. 5G). Tergum 1 with obtuse and roundish lateral carina, posterior margin broadly and roundly incised, middle depth of incision about 0.6× lateral length of tergum (Fig. 5G); middle process of sternum 7 narrow and triangular, basal breadth about 1/6 breadth of sternite 7; lance long and slender, subapical annuli clearly broadened, total length of annuli 6× height of 13th annulus, first annulus 1.7× as high as broad (Fig. 5I); lancet with 48 serrulae (Fig. 5J), middle serrulae weakly narrowed toward truncate apex, each side with 3–4 large subbasal teeth, distance between middle serrulae 2.3× basal breadth of serrulae (Fig. 5L).

Male. Unknown.

Distribution. China (Gansu, Shanxi).

Host plant. *Ulmus* spp. (Yang and Wu 1998; Wu et al. 2001).

Discussion. Li and Wu (Li and Wu 2003) placed this species in *Agenocimbex*. The external structure, male genitalia and female lancet all support the species as a member of *Asicimbex*. So a new combination is proposed for the species.

Yang and Wu (Yang and Wu 1998) recorded *Cimbex japonica* Kirby from middle Shanxi, China and reported the biology of the species in detail. However, the identification of the species was not correct. Based on the figure in the paper, the species is undoubtedly *Asicimbex elminus* (Li & Wu, 2003).

***Asicimbex eous* (Semenov, 1935) comb. nov.**
Fig. 6

Agenocimbex eoa Semenov, 1935, 15. 9–11.

Material examined. 1 female, Яковловка Сцас. у. Усср, кр, 23 May 1926, Дъяконв Филиппъев; *Agenocimbex eoa* Sem., ♀, Gussakovskij, det.; *Asicimbex eous* (Semenov, 1935), Det. M.C. Wei, 2022 (Fig. 6K) (NHRS).

Diagnosis. *A. eous* (Semenov, 1935) is close to *A. maculotegularis* Yan & Wei sp. nov., but differs from the latter by the following characters: tegula entirely yellow brown; the lateral side of the first abdominal tergum black; the 4th abdominal tergum with a large middle black macula; the middle and hind tibiae yellowish brown; the middle of first abdominal tergum not produced; the female lancet with 55 serrulae, distance between the middle serrulae 2.6× basal breadth of serrulae.

Description. Not type, female. Body length 16–18 mm (Fig. 6A).

Color. Head brown, dorsum with a quadrate black macula covering ocellar area, frons, inner half of inner orbit, lateral and middle foveae, clypeus and mouthparts largely yellow brown (Fig. 6D), antenna dark reddish brown (Fig. 6C); thorax black, pronotum largely, tegula, mesoscutellum, dorsum of metascutellum, posterior half of mesepisternum and of katepimeron, posterior stripe of metapleuron yellowish brown (Fig. 6H); abdomen yellowish brown, dorsal side of terga 1–3 black, broad middle macula on tergum 4 black and laterally yellow brown, tergum 5 yellow brown except for a small triangular macula at middle anteriorly, lateral part of terga 6–8 dark brown, pale macula at middle of terga 6–8 of gradually shortened (Fig. 6M); fore wing smoky, outer margin of fore wing without narrow smoky maculae, cells 3Rs, 2M, 3M, 1Cu, 2Cu and 2A largely subhyaline, veins and pterostigma pale brown; hind wing very feebly infuscate; legs largely yellowish brown, middle and hind coxae, trochanters and femora largely black (Fig. 6A).

Head. Dorsum of head with minute punctures, clypeus smooth, with strong luster (Fig. 6B, D). Clypeus elevated, anterior margin roundly incised; labrum small and triangular, slightly longer than broad; malar space 2× diameter of middle ocellus; postocellar area 2.1× broader than long, middle furrow weak; lateral furrows distinct, divergent backwards; POL: OOL: OCL = 3 : 5: 6; head behind eyes weakly enlarged (Fig. 6B). Antenna 1.4× head breadth, club breadth 2.3× apical breadth of antennomere 3, club length 1.2× as long as antennomere 3 (Fig. 6C), antennomere 3 as long as longest axis of eye.

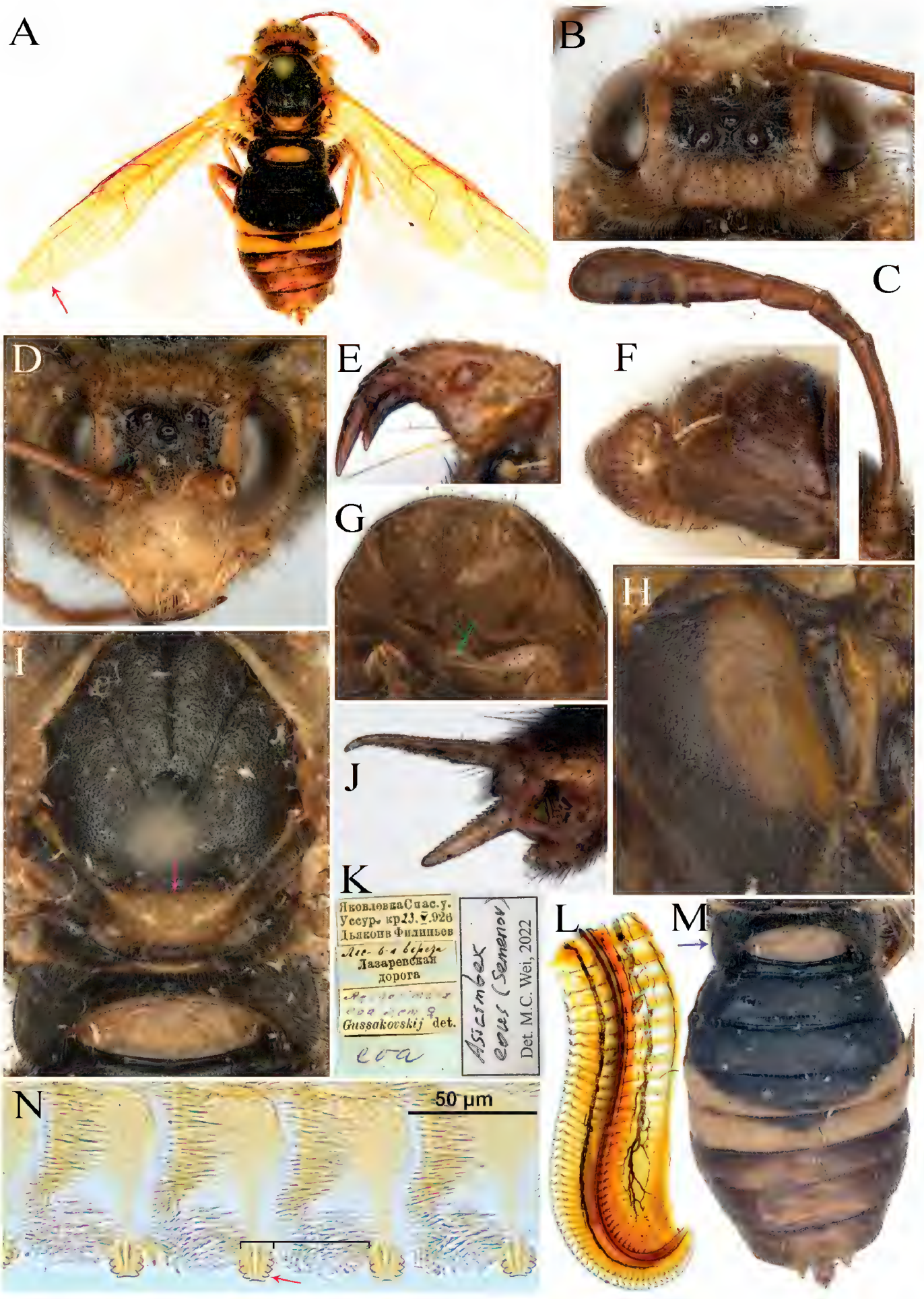

Figure 6. *Asicimbex eous* (Semenov, 1935) comb. nov., paratype, female **A** female adult in dorsal view (red arrow denotes outer margin of fore wing without narrow smoky maculae) **B** head in dorsal view **C** antenna **D** head in front view **E** claw **F** ovipositor sheath in lateral view **G** ovipositor sheath in ventral view (green arrow denotes middle process of sternum 7 narrow triangular) **H** mesopleuron and metapleuron **I** thoracic notum (purple arrow denotes scutellum with a broad and deep longitudinal furrow occupying middle 1/4) **J** spur in hind tibia **K** label **L** lancet **M** abdominal terga (blue arrow denotes lateral carina of abdominal tergum 1 obtuse, anterior corner blunt) **N** middle serrulae (orange arrow denotes pattern of subbasal teeth, distance between middle serrulae 2.6× basal breadth of serrulae).

Thorax. Mesonotum densely punctured (Fig. 6I); scutellum strongly elevated, sparsely and minutely punctured, with a broad and deep longitudinal furrow occupying middle 1/4; mesepisternum above carina densely punctured mixed with microsculptures, oblique carina on mesopleuron sharp, mesepimeron largely polished, shiny (Fig. 6H); cenchri narrow, distance between inner margin of cenchri 2.5× the longest axis of a cenchrus (Fig. 6I).

Abdomen. Abdominal tergum 1 minutely punctured mixed with microsculptures, without lateral smooth patch; lateral carina obtuse, anterior corner blunt but distinct, posterior corner roundish; posterior margin with broad and deep incision, bottom round (Fig. 6I, M); middle process of sternum 7 narrow and triangular, basal breadth about 1/6 breadth of sternite 7; lance long and slender, subapical annuli clearly broadened, total length of annuli 5× height of 13th annulus, first annulus 1.8× as high as broad (Fig. 6L); lancet with 56 annuli and 55 serrulae (Fig. 6L), middle serrulae weakly narrowed toward truncate apex, each side with 4–5 large subbasal teeth, distance between middle serrulae 2.6× basal breadth of serrulae (Fig. 6N).

Male. Unknown.

Distribution. Russia (Ussuri, Vladivostok).

Host plant. Unknown.

Asicimbex koreanus Yan & Wei, sp. nov.

https://zoobank.org/1EB6E843-50FB-44FC-97F7-AFB035C0FDBD

Fig. 7

Material examined. ***Holotype,*** female, South Korea: [GG] Hwaseong-gun, 24 May 1992, H. J. Lee (YNU). ***Paratypes,*** 4 females and 1 male, data as holotype.

Diagnosis. *A. koreanus* Yan & Wei sp. nov. is quite close to *A. malaisei* (Gussakovskij, 1947) comb. nov. from Ussuri of Russia. It differs from the latter by the following characters: the apical club of antenna longer than antennomere 3 and about 1.6× as long as antennomeres 4 and 5 together; cenchrus very narrow and about 4× as long as broad; the dorsum of mesoscutellum densely punctured; the upper half of mesepisternum densely punctured mixed with wrinkles; the lateral carina of the first abdominal tergum roundly curved, the anterior corner not angulate; the apex of the middle process of the seventh sternum acute; the black macula on dorsum of head not subquadrate, with three processes; the apical margin of fore wing without smoky macula; lancet with 56 serrulae, the distance between middle serrulae broader than 2× breadth of a serrula.

Description. Holotype, female. Body length 21 mm (Fig. 7A).

Color. Head and antenna yellowish brown, dorsum with a M-shaped black macula, clypeus and mouthparts largely yellow brown (Fig. 7C, E); thorax largely black, narrow posterior margin and broad lateral margin of pronotum, anterior part of tegula, mesoscutellum, dorsum of metascutellum, posterior 3/4 of mesepisternum above carina and posterior half of katepimeron, metepisternum largely yellowish brown (Fig. 7F); abdomen yellowish brown, dorsal side of terga 1–3 entirely, broad triangular middle macula on tergum 4 and narrow basal margin of tergum 5 black, narrow lateral margin

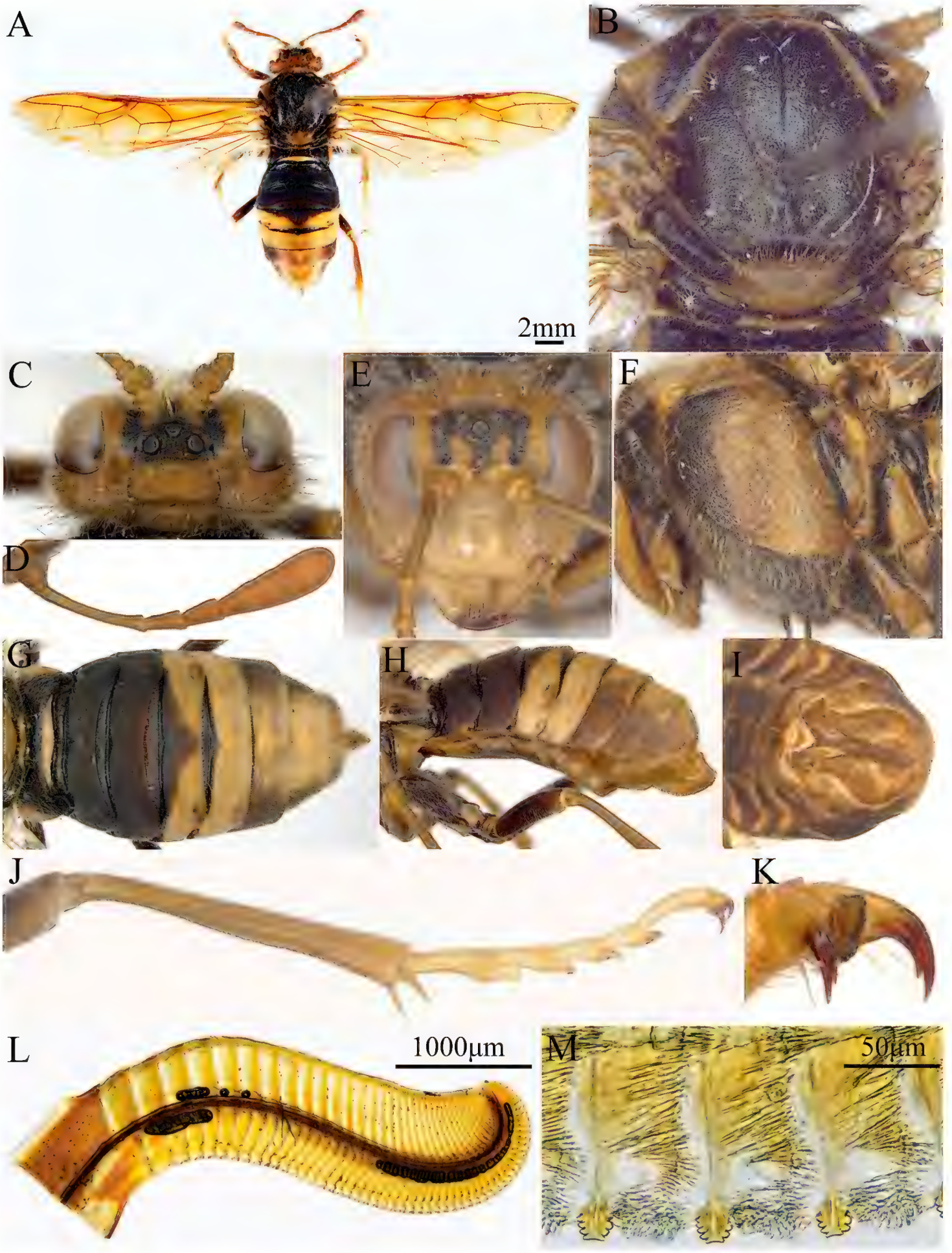

Figure 7. *Asicimbex koreanus* Yan & Wei sp. nov., holotype, female **A** female adult in dorsal view **B** thoracic notum **C** head in dorsal view **D** antenna **E** head in front view **F** mesopleuron and metapleuron **G** abdominal terga **H** lateral side of abdomen **I** ovipositor sheath in ventral view **J** tibia and tarsus **K** claw **L** lancet **M** middle serrulae.

of tergum 1, tergum 4 except for middle triangular macula, tergum 5 almost entirely, broad quadrate middle macula on terga 6–8 pale yellow brown, lateral part of terga 6–8 dark brown (Fig. 7G, H), sterna largely dark brown (Fig. 7I); fore wing distinctly infuscate, outer margin of fore wing without narrow smoky maculae, cells 2Rs, 3Rs, 2M, 3M, 1Cu, 2Cu and 2A largely subhyaline, veins and pterostigma pale brow; hind wing very feebly infuscate; legs largely yellowish brown, middle and hind coxae, trochanters and femora largely black, tarsi yellowish white (Fig. 7A, J).

Head. Dorsum of head with minute punctures, clypeus smooth, with strong luster (Fig. 7C, 7E). Clypeus elevated, anterior margin roundly incised; labrum as long as broad, apex round; malar space 1.7× diameter of middle ocellus; postocellar area 2× broader than long, middle furrow weak; lateral furrows distinct, feebly divergent backwards; POL: OOL: OCL = 3 : 5: 6; head behind eyes weakly enlarged (Fig. 7C). Antenna 1.6× head breadth, club breadth 2.2× apical breadth of antennomere 3, club length 1.1× as long as antennomere 3 and 1.6× combined length of antennomeres 4 and 5 (Fig. 7D), antennomere 3 as long as longest axis of eye.

Thorax. Mesonotum minutely and densely punctured (Fig. 7B); scutellum roundly elevated without middle furrow, dorsum densely punctured; mesepisternum above carina densely and minutely punctured mixed with microsculptures, oblique carina on mesopleuron sharp, mesepimeron largely polished, shiny (Fig. 7F); cenchri very narrow and about 4× as long as broad, distance between inner margin of cenchri 2.8× longest axis of a cenchrus (Fig. 7B).

Abdomen. Abdominal tergum 1 minutely punctured mixed with microsculptures, without lateral smooth patch; lateral carina low and obtuse, anterior and posterior corners round, posterior margin with broad and deep incision, bottom round (Fig. 7G); middle process of sternum 7 broad and triangular, basal breadth about 1/3 breadth of sternite 7; lance long and slender, subapical annuli clearly broadened, total length of annuli 5.4× height of 13th annulus, first annulus 1.8× as high as broad (Fig. 7L); lancet with 57 annuli and 56 serrulae (Fig. 7L), middle serrulae weakly narrowed toward truncate apex, each side with 4–5 large subbasal teeth, distance between middle serrulae 2.2× basal breadth of serrulae (Fig. 7M).

Male. Color and structure similar to female. Genitalia not examined.

Distribution. South Korea.

Host plant. Unknown.

***Asicimbex latistriatus* Yan, Deng & Wei, sp. nov.**

https://zoobank.org/61439B73-F905-4494-8918-BB5717F08C3F

Fig. 8

Material examined. ***Holotype*,** female, China: Henan Province, Shan County, Ganshan Park, alt. 1000 m, 31 May 2000, leg. Meicai Wei & Yihai Zhong (ASMN). ***Paratypes*,** 7 females and 2 males, same data as the holotype; 1 female and 4 males, same locality, 1 June 2000 (ASMN).

Diagnosis. The species is most similar to *A. nanjingensis* Yan & Wei sp. nov., but differs from the latter in the following characters: the postocellar area 1.2–1.3× broader than long; abdominal tergum 1 without lateral carina, the posterior corner of the tergum not produced; the dorsum of mesoscutellum sparsely and minutely punctured, the surface smooth; the antennomere 3 clearly longer than longest axis of eye; the total length of lance annuli 3.9× height of the 13th annulus, the first annulus 2.7× as high as broad; lancet with 46 serrulae.

Description. Holotype, female. Body length 14 mm (Fig. 8A).

Color. Head including antenna dark yellowish brown (Fig. 8A), frons and nearby with an obscure black macula (Fig. 8C, F); thorax black, posterior margin and lateral corner of pronotum, tegula, mesoscutellum and lateral carina dark brown, mesepisternum above carina largely, posterior margin of mesepimeron, irregular macula on metepisternum and large macula on metepimeron reddish brown (Fig. 8K); abdomen dark brown, basal margin of tergum 1 and small macula near posterior corner, anterior 4/5 of tergum 2, anterior 1/3 of tergum 3, basal margin of terga 4–7 and sterna 1–3 largely black, tergum 4 slightly paler (Fig. 8O, P). Fore wing strongly smoky, cells 2M, 3M, 2Cu and A largely hyaline, veins and pterostigma largely brown to dark brown; hind wing weakly infuscate (Fig. 8A). Legs dark brown, middle and hind coxae, trochanters and dorsal side of femora black (Fig. 8I, J).

Head. Dorsum of head with indistinct and fine punctures, other parts smooth, with strong luster (Fig. 8C, F). Clypeus clearly elevated in middle, anterior margin with small and deep incision; malar space 1.8× diameter of middle ocellus (Fig. 8C); postocellar area about 1.2–1.3× broader than long; median furrow weak, lateral furrows fine, weakly divergent backwards; POL: OOL: OCL = 5: 6: 9; in dorsal view head enlarged behind eye (Fig. 8F). Antenna about 1.4× longer than head breadth (Fig. 8H); apical club slightly longer than antennomere 3, with the widest breadth 2.4× apical breadth of antennomere 3, antennomere 3 clearly longer than longest axis of eyes (45: 39).

Thorax. Mesothorax densely punctured, punctures on mesoscutellum sparser, surface smooth; mesonotum feebly shiny; punctures on mesepisternum above carina and elevated parts of mesepimeron dense and deep, clearly defined, interspace between punctures smooth, concave area of mesepimeron microsculptured, punctures on ventral side of mesepisternum sparse (Fig. 8E, K); mesoscutellum roundly elevated, without middle furrow; oblique middle carina on mesepisternum weak but recognizable; cenchri oval, distance between cenchri about 3.4× longest axis of a cenchrus, metascutellum triangularly elevated, distance between serrulae about 2.3× basal breadth of a serrula (Fig. 8E).

Abdomen. Abdominal tergum 1 with minute punctures and microsculptures, other terga finely and densely microsculptured (Fig. 8O, P). Tergum 1 without lateral carina, hind corner roundish, not produced, posterior incision broad and deep, bottom round (Fig. 8O); middle process of sternum 7 broad and triangular, basal breadth about 1/3 breadth of sternite 7; lance short and broad, subapical annuli feebly broadened, total length of annuli 3.9× height of 13th annulus, first annulus 2.7× as high as broad (Fig. 8N); lancet with 47 annular sutures and 46 serrulae (Fig. 8N), middle serrulae narrowly truncate at apex with about 5 proximal and 5 distal subbasal teeth (Fig. 8Q).

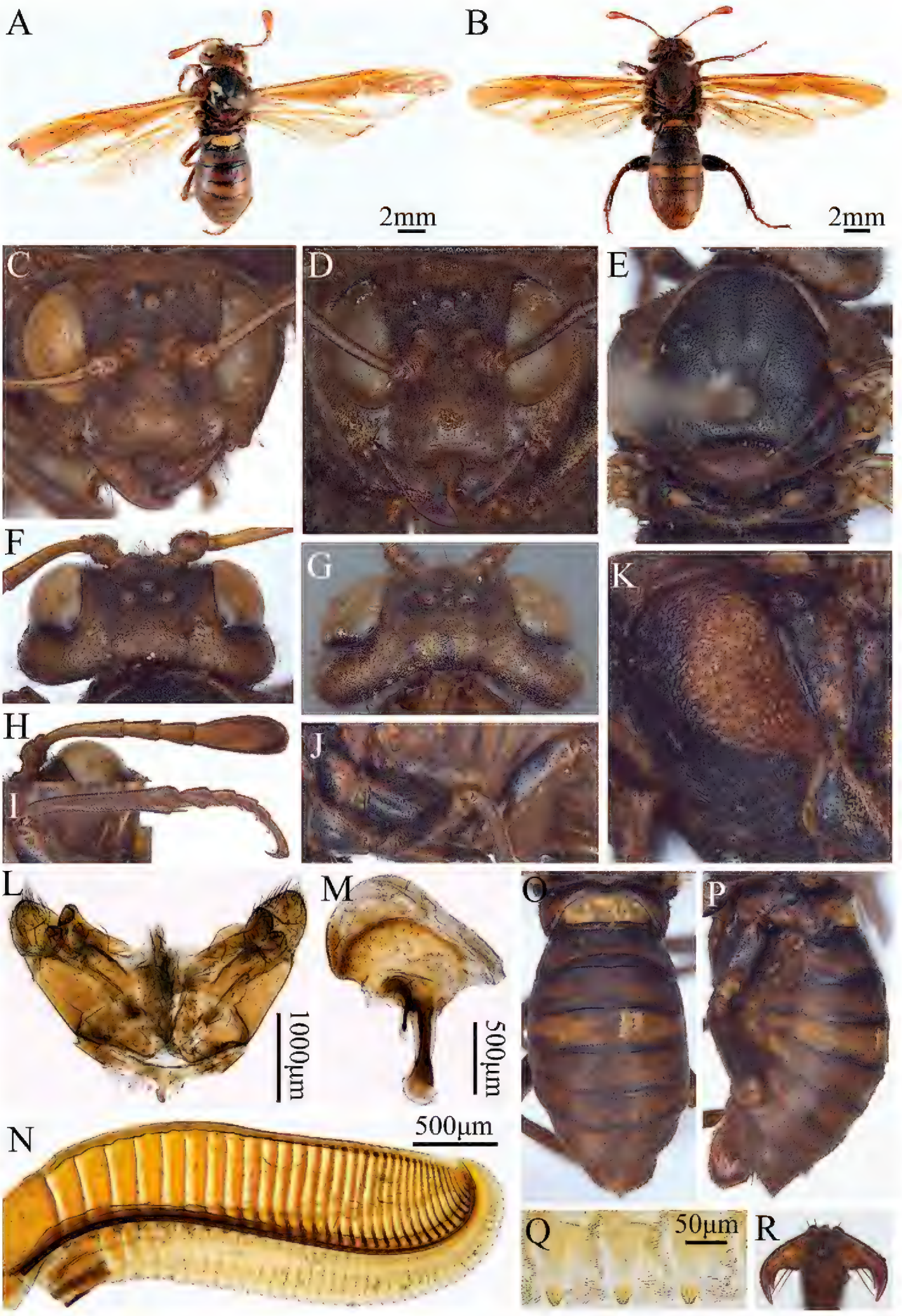

Figure 8. *Asicimbex latistriatus* Yan & Wei sp. nov., **A** holotype female in dorsal view **B** allotype male in dorsal view **C** head of female in front view **D** head of male in front view **E** thoracic notum **F** head of female in dorsal view **G** head of male in dorsal view **H** antenna of female **I** tibia and tarsus **J** coxa and femur of male **K** mesopleuron and metapleuron **L** gonoforceps **M** penis valve **N** lancet **O** abdominal terga **P** lateral side of abdomen **Q** middle serrulae **R** claw.

Male. Body length 16 mm (Fig. 8B), body color and structure (Fig. 8D, G) similar to female except for following parts: posterior of postocellar area in middle with a shallow depressed groove; abdominal terga 2–3 largely blackish brown; middle and hind coxae and femora distinctly elongated, with carina; hind femora distinctly swollen, about twice as broad as trochanter; penis valve shown in Fig. 8M, gonoforceps as shown in Fig. 8L.

Distribution. China (Henan); South Korea?

Variation. Body length 13–15 mm in female, 16–17 mm in male; club of antenna dark brown or yellowish brown; middle and hind coxae brown or blackish brown.

Etymology. The specific epithet is a combination of the Latin word: "*lati-*" and "*-striatus*", referring to the fore wing with a broad longitudinal smoky stripe.

Host plant and larva. The adult types of the new species were reared two years later from the larvae collected on the trunk of *Ulmus* sp. The matured larvae are yellow colored with black head, thorax and abdomen without black macula.

Remarks. The senior author of the paper examined 2 females and 3 males of *A. latistriatus* from South Korea in 2013, when there were only five species (*eous*, *malaisei*, *elminus*, *ulmusvorus* and the undescribed *latistriatus*) of the undescribed genus *Asicimbex* known to the author. The specimens were kept in Yeungnam University. Confirmation of this faunal record requires re-examination of the specimens.

Asicimbex lii Yan & Wei, sp. nov.

https://zoobank.org/F2E362F3-1EE9-4C49-BC00-FC6F6881CF98

Fig. 9

Material examined. ***Holotype***, female, China: Liaoning Province, Haicheng City, Jiulongchuan, 40.624°N, 123.096°E, 650 m, 10 May 2017, leg. Zejian Li (ASMN).

Diagnosis. This new species is most similar to *A. malaisei* (Gussakovskij, 1947) but differs from the latter by the following characters: the lateral sides and posterior end of mesoscutal middle lobe and the inner side of mesoscutal lateral lobes yellowish brown; the dorsum of head with a narrow M-shaped black macula; the pale lateral stripe and pale posterior margin of the first abdominal tergum connected in front of the roundish lateral black macula; the third tergum with a distinct lateral pale macula, the pale macula on terga 6–8 distinct and about 4× broader than long; cenchri broad, distance between cenchri 2.2× the longest axis of a cenchrus; distance between the middle serrulae narrower than 2× the breadth of a serrula; and the total length of annuli of lance 4.8× height of 13th annulus.

Description. Holotype, female. Body length 20.5 mm (Fig. 9A).

Color. Head and antenna orange brown, dorsum of head with a narrow M-shaped black macula, clypeus yellowish brown (Fig. 9B, C); thorax black, posterior margin and lateral lobe of pronotum, tegula, lateral sides and posterior end of mesoscutal middle lobe and inner side of mesoscutal lateral lobe, mesoscutellum and dorsum of metascutellum, mesepisternum above carina largely, posterior half of katepimeron, lower part of metepisternum, middle of mesosternum yellowish brown (Fig. 9D, G); abdomen yellowish brown, following parts black: a transverse anterior band and a

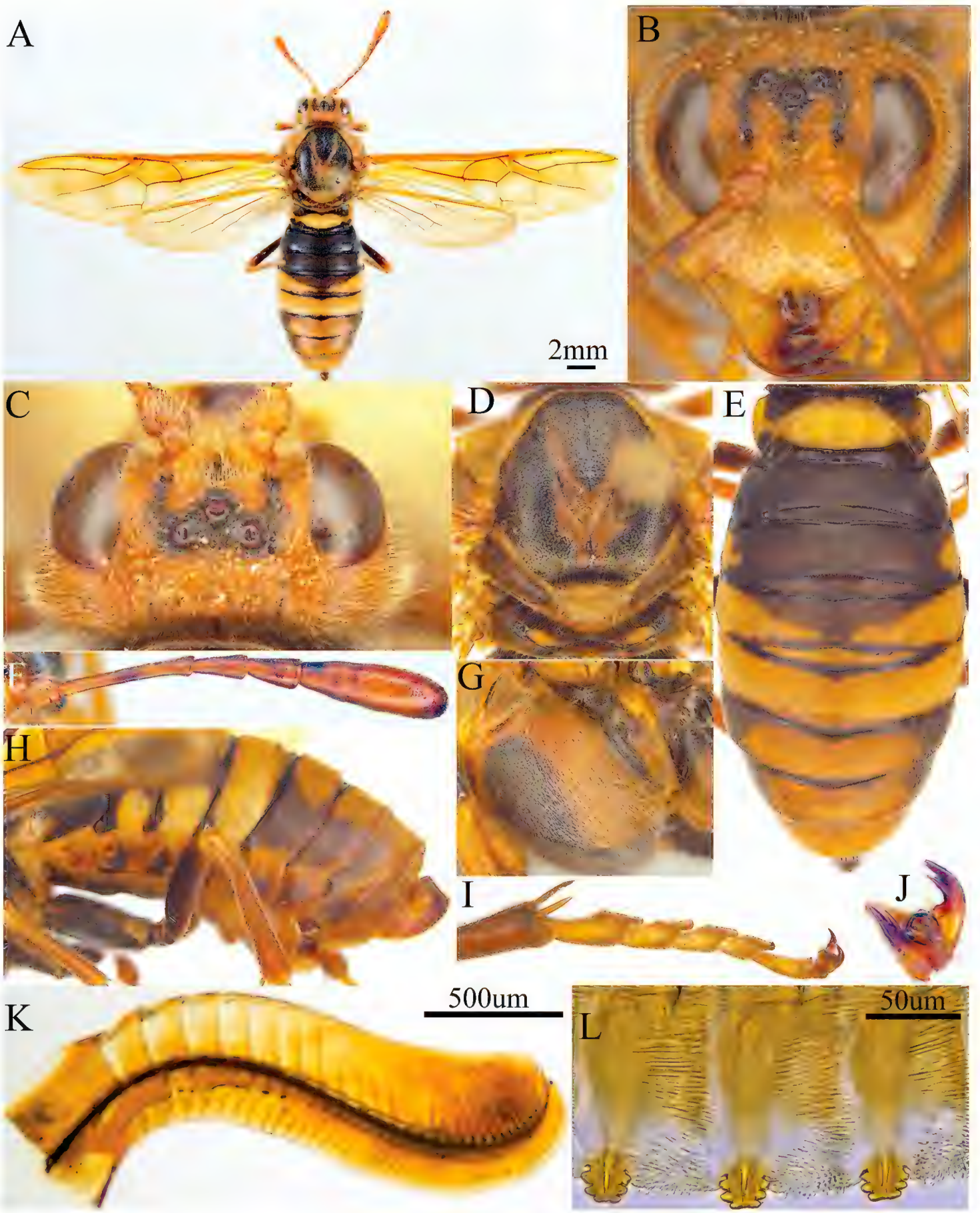

Figure 9. *Asicimbex lii* Yan & Wei sp. nov., holotype, female **A** female adult in dorsal view **B** head in front view **C** head in dorsal view **D** thoracic notum **E** abdominal terga **F** antenna **G** mesopleuron and metapleuron **H** lateral side of abdomen **I** hind tarsus **J** claw **K** lancet **L** middle serrulae.

small round lateral macula on tergum 1, tergum 2 entirely, tergum 3 except for lateral small macula, a large triangular middle macula and narrow posterior margin of tergum 4, tergum 5 except for narrow anterior margin, lateral macula on terga 6–8 (Fig. 9E), an anterior small macula on ventral fold of terga 3–8 (Fig. 9H), and basal macula on sterna 3–7; pale middle macula of terga 6–8 same size, about 3× broader than long.

Fore wing distinctly infuscate, cells 2M, 3M, 2Cu and 2A largely subhyaline, veins and pterostigma largely brown to pale brown; hind wing weakly infuscate at apex (Fig. 9A); legs largely yellowish brown, middle and hind coxae with black longitudinal stripes ventrally and dorsally, trochanters and femora largely blackish brown (Fig. 9A, H).

Head. Dorsum of head with minute punctures, clypeus smooth with strong luster (Fig. 9B, C). Clypeus elevated, anterior margin narrowly and deeply incised; labrum small and triangle, long than broad; malar space 1.8× diameter of middle ocellus; postocellar area 2.1× broader than long, middle furrow weak; lateral furrows distinct, slightly divergent backwards; POL: OOL: OCL = 3.5 : 4: 6; head behind eyes weakly enlarged (Fig. 9B, C); antenna 1.6× head breadth, club breadth 2.4× apical breadth of antennomere 3, club length 1.3× length of antennomere 3 (Fig. 9F), antennomere 3 as long as longest axis of eye.

Thorax. Mesonotum very densely punctured (Fig. 9D), mesopleuron densely and minutely punctured, interspaces between punctures microsculptured; mesoscutellum roundly elevated, without middle furrow; mesopleuron with a distinct oblique carina; cenchrus elliptical, distance between inner margin of cenchri 2.2× longest axis of a cenchrus.

Abdomen. Abdominal tergum 1 with minute punctures and microsculptures, other terga finely and densely microsculptured, ovipositor sheath largely smooth (Fig. 9E, H). Tergum 1 with low but distinct lateral carina, anterior corner roundish; posterior margin very deeply and roundly incised (Fig. 9E); middle process of sternum 7 broad and triangular, basal breadth about 1/3 breadth of sternite 7; lance narrow and long, subapical annuli clearly broadened, total length of annuli 4.8× height of 13th annulus, first annulus 1.5× as high as broad (Fig. 9K); lancet with 47 serrulae (Fig. 9K), middle serrulae weakly narrowed toward truncate apex, each side with 3–4 large subbasal teeth, distance between middle serrulae 1.8× basal breadth of serrulae (Fig. 9L).

Male. Unknown.

Distribution. China (Liaoning).

Etymology. The specific epithet refers to the last name of collector of the holotype.

Host plant. Unknown.

Asicimbex maculotegularis Yan & Wei, sp. nov.

https://zoobank.org/57BFD120-5416-4AE1-A5D0-207AB20DB888

Fig. 10

Material examined. ***Holotype,*** female, China: Liaoning Province, Benxi, Mt. Bapanling, 16 May 2017, Ruifen Huang (ASMN).

Diagnosis. *A. maculotegularis* Yan & Wei sp. nov. is close to *A. eous* (Semenov, 1935) but differs from the latter by the following characters: Tegula largely black; the lateral side of the first abdominal tergum yellowish brown; the 4th abdominal tergum with a small middle black macula; the middle and hind tibiae reddish brown; the first abdominal tergum with middle part distinctly produced; lancet with 51 serrulae, distance between the middle serrulae 2.2× breadth of a serrula.

Description. Holotype, female. Body length 18.5 mm (Fig. 10A).

Figure 10. *Asicimbex maculotegularis* Yan & Wei sp. nov., holotype, female **A** female adult in dorsal view **B** thoracic notum **C** head in dorsal view **D** antenna **E** head in front view **F** mesopleuron and metapleuron **G** abdominal terga **H** lateral side of abdomen **I** ovipositor sheath in ventral view **J** lancet **K** middle serrulae.

Color. Head and antenna dark yellowish brown, dorsum with a subquadrate black macula covering ocellar area, frons, inner half of inner orbit, lateral and middle foveae, clypeus and mouthparts largely yellow brown (Fig. 10C, E); thorax black, pronotum largely, anterior third of tegula, mesoscutellum, dorsum of metascutellum, posterior half of mesepisternum above carina and posterior half of katepimeron, posterior stripe of metepisternum yellowish brown (Fig. 10B, F); dorsum of abdomen black, lateral margin of tergum 1, 4th tergum except for middle triangular macula, 5th tergum almost entirely and middle third of terga 6–8 pale yellowish brown, lateral part of terga 6–8 blackish

brown (Fig. 10G, H), venter of abdomen dark brown, lateral macula on sterna 4–6 and sternum 7 yellowish brown (Fig. 10I); fore wing distinctly infuscate in anterior half, outer margin without narrow smoky macula, cells 2M, 3M, 2Cu and 2A largely subhyaline, veins and pterostigma pale brown; hind wing very feebly infuscate; legs largely yellowish brown, middle and hind coxae, trochanters and femora largely black (Fig. 10A).

Head. Dorsum of head with minute punctures, clypeus largely smooth, with strong luster (Fig. 10B, C, E). Clypeus elevated, anterior margin roundly incised; labrum small and triangular, slightly broader than long; malar space 1.7× diameter of middle ocellus; postocellar area 2.1× broader than long, middle furrow weak; lateral furrows distinct, divergent backwards; POL: OOL: OCL = 3 : 5: 6; head behind eyes weakly enlarged (Fig. 10C); antenna 1.6× head breadth, club breadth 2× apical breadth of antennomere 3, club length 1.1× as long as antennomere 3 and 1.38× the combined length of antennomeres 4 and 5 (Fig. 10D), antennomere 3 as long as longest axis of eye.

Thorax. Mesonotum densely punctured (Fig. 10B); scutellum strongly elevated with a broad and deep middle furrow, sparsely punctured; mesepisternum above carina densely but shallowly punctured mixed with microsculptures, oblique carina on mesopleuron sharp, mesepimeron largely polished, shiny (Fig. 10F); cenchri elliptical, distance between inner margin of cenchri 2.3× the longest axis of a cenchrus (Fig. 10B).

Abdomen. Abdominal tergum 1 minutely punctured mixed with microsculptures, without lateral smooth patch; lateral carina low but recognizable, anterior corner blunt, posterior corner roundish; posterior margin with broad and incision, bottom not round with obtuse middle process (Fig. 10G, H); middle process of sternum 7 narrow and triangular, basal breadth about 1/6 breadth of sternite 7; lance long and slender, subapical annuli clearly broadened, total length of annuli 5.3× height of 13th annulus, first annulus 1.8× as high as broad (Fig. 10J); lancet with 52 annuli and 51 serrulae (Fig. 10J), middle serrulae weakly narrowed toward truncate apex, each side with 4–5 large subbasal teeth, distance between middle serrulae 2.2× basal breadth of serrulae (Fig. 10K).

Male. Unknown.

Distribution. Russia (Ussuri, Vladivostok).

Host plant. Unknown.

Asicimbex malaisei (Gussakovskij, 1947) comb. nov., New record for China

Fig. 11

Agenocimbex malaisei Gussakovskij, 1947: 30, 32.

Material examined. 1 female, China: Heilongjiang Province, Shangzhi, Mt. Mao'er, 4 June 2014, leg. Jun Xu (ASMN).

Diagnosis. This new species is most similar to *A. koreanus* Yan & Wei sp. nov. but differs from the latter by the following characters: the black macula on dorsum of head subquadrate; the apical club of antenna as long as antennomere 3, about 1.3× as long as antennomeres 4 and 5 together; cenchrus normal, about 3× as long as broad;

the dorsum of mesoscutellum sparsely punctured; the upper half of mesepisternum sparsely punctured, wrinkles indistinct; the lateral carina of the first abdominal tergum roundly curved only in posterior half, anterior corner angulate; lancet with 48 serrulae, the distance between the middle serrulae about 2× breadth of a serrula; lance slender with the first annulus 1.8× as high as broad.

Description. Not type, female. Body length 21 mm (Fig. 11A).

Color. Head and antenna yellowish brown, dorsum with a subquadrate black macula, clypeus and mouthparts largely yellow brown (Fig. 11C, E); thorax largely black, very narrow posterior margin and narrow lateral margin of pronotum, mesoscutellum, dorsum of metascutellum, posterior 3/4 of mesepisternum above carina and posterior stripe of katepimeron, metepisternum largely dark brown (Fig. 11B, F); abdomen mostly dark brown, dorsal side of terga 1–3 entirely, broad triangular middle macula on tergum 4 and narrow basal margin of tergum 5 black, narrow lateral margin of tergum 1, tergum 4 except for middle triangular macula, tergum 5 almost entirely yellowish brown, broad quadrate middle macula on terga 6–8 pale brown (Fig. 11G), lateral part of sterna 4–6 and most of sternum 7 pale brown (Fig. 11H, K); fore wing infuscate in anterior half, outer margin of fore wing with narrow smoky macula, cells 2Rs, base of 3Rs, 2M, most of 3M, apical 2/5 of 1Cu, 2Cu and 2A largely subhyaline, veins and pterostigma pale brown; hind wing faintly infuscate; legs largely yellowish brown, middle and hind coxae, trochanters and femora largely black, tarsi largely yellowish white (Fig. 11A, I, J).

Head. Dorsum of head with minute punctures, clypeus smooth, with strong luster (Fig. 11C, E). Clypeus elevated, anterior margin roundly incised; labrum as long as broad, apex round; malar space 1.5× diameter of middle ocellus; postocellar area 2× broader than long, middle furrow weak; lateral furrows distinct, feebly divergent backwards; POL: OOL: OCL = 3 : 5: 6; head behind eyes distinctly enlarged (Fig. 11C). Antenna 1.5× head breadth, club breadth 2.2× apical breadth of antennomere 3, club length 1.1× as long as antennomere 3 and 1.3× combined length of antennomeres 4 and 5 (Fig. 11D), antennomere 3 as long as longest axis of eye.

Thorax. Mesonotum minutely and densely punctured (Fig. 11F); scutellum roundly elevated without middle longitudinal furrow, dorsum densely punctured, anterior slope sparsely punctured; mesepisternum above carina sparsely punctured, wrinkles indistinct; oblique carina on mesopleuron sharp, mesepimeron largely polished, shiny (Fig. 11B); cenchri very narrow and about 4× as long as broad, distance between inner margin of cenchri 3× longest axis of a cenchrus (Fig. 11B).

Abdomen. Abdominal tergum 1 minutely punctured mixed with microsculptures, without lateral smooth patch; lateral carina low and obtuse, anterior corner angulate, posterior corner round, posterior margin with broad and deep incision, bottom round (Fig. 11G); middle process of sternum 7 broad, apex roundish, basal breadth about 1/3 breadth of sternite 7 (Fig. 11K); lance long and slender, subapical annuli clearly broadened, total length of annuli 5.2× height of 13th annulus, first annulus 1.5× as high as broad (Fig. 11M); lancet with 57 annuli and 56 serrulae (Fig. 11M), middle serrulae weakly narrowed toward truncate apex, each side with 3–4 large subbasal teeth, distance between middle serrulae 2× basal breadth of serrulae (Fig. 11N).

Figure 11. *Asicimbex malaisei* (Gussakovskij, 1947) comb. nov., not type, female **A** female adult in dorsal view (Red arrow denotes outer margin of fore wing with narrow smoky macula) **B** mesopleuron and metapleuron **C** head in dorsal view **D** antenna **E** head in front view **F** thoracic notum (purple arrow denotes scutellum without middle longitudinal furrow) **G** abdominal terga (anterior corner of lateral carina angulate at abdominal tergum 1) **H** lateral side of abdomen **I** coxa and femur **J** tibia and tarsus **K** ovipositor sheath in ventral view (green arrow denotes middle process of sternum 7 narrow triangular) **L** claw **M** lancet **N** middle serrulae (orange arrow denotes pattern of subbasal teeth).

Male. Color and structure similar to female. Genitalia not examined. Description of male see (Gussakovskij 1947).

Distribution. China (Heilongjiang); Russia (Ussuri).

Host plant. Unknown.

Remarks. Gussakovskij (Gussakovskij 1947) described this species and discussed the possibility of it being the male of *Asicimbex eous* (Semenov 1935). But, the difference with *A. eous* are the outer margin of fore wing with narrow smoky macula; the mesoscutellum without middle longitudinal furrow, dorsum densely punctured; anterior slope sparsely punctured; the middle process of female sternum 7 narrow triangular, basal breadth much shorter than height and about 1/6 breadth of the sternum; the pattern of subbasal teeth, distance between middle serrulae 2× basal breadth of serrulae; the lateral carina of abdominal tergum 1 low and obtuse, anterior corner angulate, posterior corner round. These characteristics indicate that *A. malaisei* and *A. eous* are distinct species.

***Asicimbex nanjingensis* Yan & Wei, sp. nov.**

https://zoobank.org/276A9854-B6A0-45D9-A181-18C22B4CE399

Fig. 12

Material examined. ***Holotype*,** female, China: Jiangsu Province, Nanjing City, Zhongshanling, July 2007, leg. Meicai Wei. ***Paratype*,** 1 male, same data as holotype (ASMN).

Diagnosis. This new species is most similar to *A. concavicaputus* Yan & Wei sp. nov. but differs from it by the following characters: antennomere 3 as long as the longest axis of eye; malar space shorter than the basal 2 antennomeres together; the anterior smoky stripe of fore wing extending to the apex; head with dorsal black macula remote from eyes; posterior of postocellar area not concave at middle; the first annulus of lance 2.2× as high as long.

Description. Holotype, female. Body length 15 mm (Fig. 12A).

Color. Head dark brown (Fig. 12C, F), frontal area and ocellar area blackish brown; antenna brown at base, dark brown at apex. Thorax black (Fig. 12E, I), posterior margin of pronotum, anepimeron, tegula, metascutellum and lateral carina, metanotum, a large macula on posterior of mesepisternum, middle suture of metepisternum, metepimeron largely reddish brown; abdomen dark brown (Fig. 12L, M), tergum 1 except both lateral margins black, tergum 2 blackish brown, basal margin of terga 3–8 black. Legs reddish brown, middle and hind coxae, trochanters and stripes on outer side of femora brownish black. Fore wings smoky in anterior half and hyaline in posterior half (Fig. 12A), veins pale brown, stigma yellowish brown; hind wing weakly infuscate.

Head. Head densely and minutely punctured dorsally, clypeus sparsely punctured, surface smooth with strong luster; anterior incisions of clypeus deep and round; labrum small, broader than long; malar space 1.6× diameter of middle ocellus; postocellar area 1.5× broader than long; without middle furrow; lateral furrows narrow, subparallel; POL: OOL: OCL = 5: 8: 11. Head clearly dilated behind eye in dorsal view (Fig. 12C, F). Antenna about 1.6× broader than head breadth, club breadth about 2.2× apical

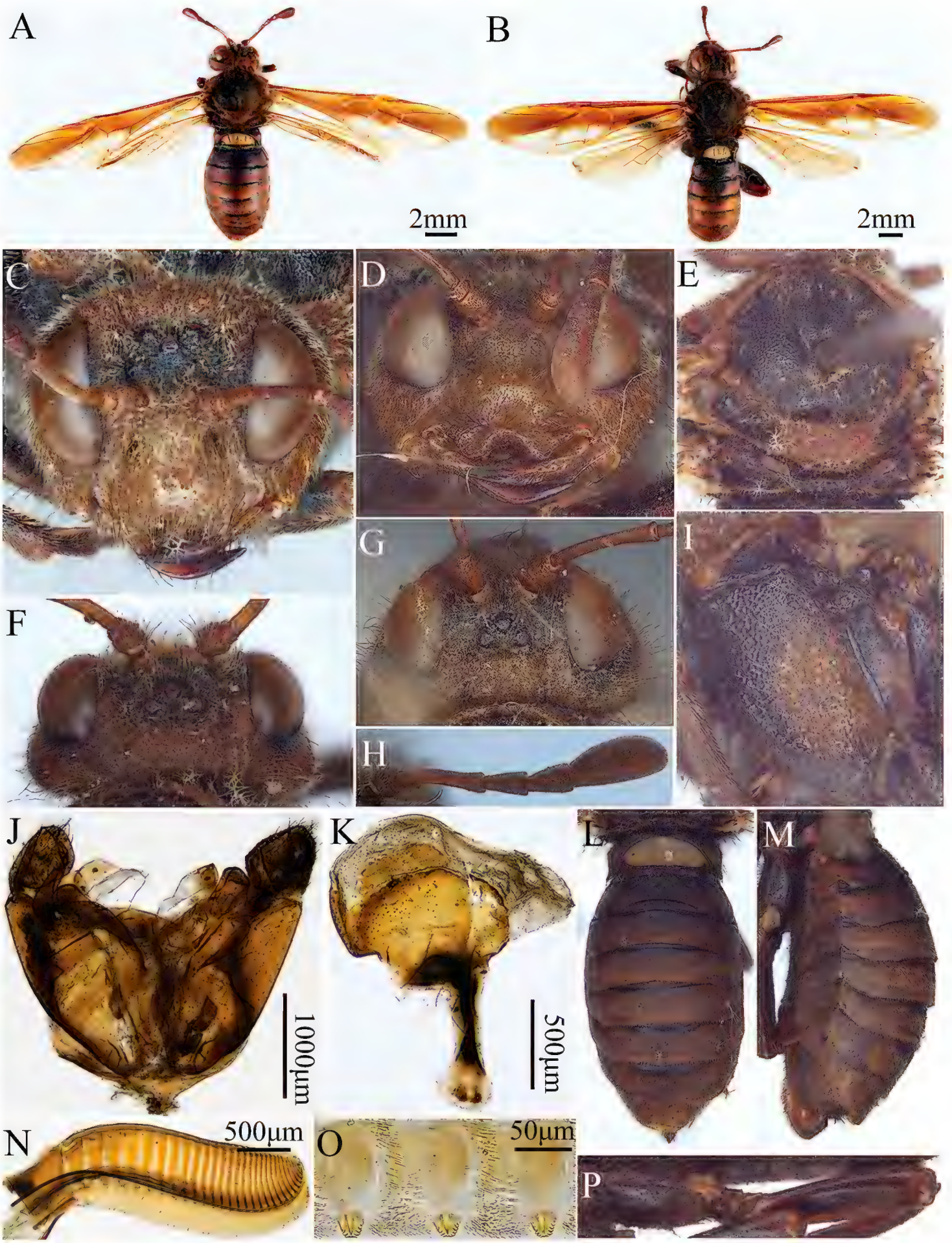

Figure 12. *Asicimbex nanjingensis* Yan & Wei sp. nov., **A** holotype female in dorsal view **B** allotype male in dorsal view **C** head of female in front view **D** head of male in front view **E** thoracic notum **F** head of female in dorsal view **G** head of male in dorsal view **H** antenna of female **I** mesopleuron and metapleuron **J** gonoforceps **K** penis valve **L** abdominal terga **M** lateral side of abdomen **N** lancet **O** middle serrulae **P** coxa and femur of male.

breadth of antennomere 3, club length 1.1× length of antennomere 3, antennomere 3 as long as the longest axis of eyes (Fig. 12H).

Thorax. Mesonotum, mesopleuron deeply and densely punctured, interspace between punctures microsculptured (Fig. 12E, I). Notauli broad and deep; lower margin of metapleuron with obtuse oblique carina; mesoscutellum roundly elevated without middle furrow; cenchri elliptical, distance between cenchri about 3× the longest axis of a cenchrus; metascutellum triangularly protruded upwards (Fig. 12E).

Abdomen. Abdominal terga with fine and dense microsculptures (Fig. 12L, M). Tergum 1 with distinct lateral carina at anterior 2/3, hind corner pointed, distinctly protruded, posterior margin broadly and very deeply incised to a depth about 3/4 lateral length of tergum; middle process of sternum 7 broad, apex roundish, basal breadth about 1/3 breadth of sternite 7. Lancet with 42 serrulae (Fig. 12N); middle serrulae distinctly narrowed toward blunt apex with 4–5 proximal and 5–6 distal subbasal teeth, distance between serrulae 2.6× basal breadth of a serrula (Fig. 12O); lance short and broad, subapical annuli feebly broadened, total length of annuli 3.6× height of 13th annulus, first annulus 2.2× as high as broad (Fig. 12L).

Male. Body length 20 mm (Fig. 12B). Body color and structures similar to female, but differs from the latter in the following characters: fore coxae and femora distinctly prolonged (Fig. 12P), middle and hind coxae and femora distinctly enlarged and extended, coxae prismatic with edges, shiny. Subgenital plate roundish at apex. Penis valve broad as shown in Fig. 12K, gonoforceps as shown in Fig. 12J.

Distribution. China (Jiangsu).

Etymology. The species name is derived from its type locality, Nanjing.

Host plant. Unknown.

Asicimbex shengi Yan & Wei, sp. nov.

https://zoobank.org/21B978B8-1EBC-4A71-8EFA-88C430DBF144

Fig. 13

Material examined. ***Holotype,*** female, China: Liaoning Province, Shenyang City, Mt. Qipan, 11 May 2014, leg. Tao Li (ASMN).

Diagnosis. This new species is similar *A. lii* Yan & Wei sp. nov., but differs from it by the following characters: the apical club of antenna clearly shorter than antennomere 3 and about 1.15× as long as antennomeres 4 and 5 together; the mesoscutal middle and lateral lobes black without pale markings, mesepisternum above carina almost entirely reddish brown, surface almost smooth; lancet with 51 serrulae, serrula small, clearly narrowed toward apex, distance between the middle serrulae more than 2× as broad as a serrula; the total annuli length of lance 5.4× height of the 13th annulus.

Description. Holotype, female. Body length about 19 mm (Fig. 13A).

Color. Head and antenna dark yellowish brown (Fig. 13B–D), dorsum with a M-shaped black macula; thorax black (Fig. 13E), narrow posterior margin and broad lateral

Figure 13. *Asicimbex shengi* Yan & Wei sp. nov., holotype, female **A** female adult in dorsal view **B** head in dorsal view **C** antenna **D** head in front view **E** thoracic notum **F** abdominal terga **G** leg **H** mesopleuron and metapleuron **I** lateral side of abdomen **J** lance **K** ovipositor sheath in lateral view **L** lancet **M** middle serrulae.

margin of pronotum, tegula, mesoscutellum and dorsum of metascutellum yellowish brown, mesepisternum largely (only small macula on anterior margin black), posterior part of mesepimeron, metapleuron largely reddish brown (Fig. 13E, H). Abdominal terga 1–3, median triangular macula of tergum 4, anterior margin of tergum 5 black,

other part of tergum 4 and almost entirely tergum 5 yellow brown; both sides of terga 6–8 and ventral fold of terga 2–8 dark brown to blackish brown (Fig. 13I); sternites largely dark brown; both sides of sternites 4–7 pale brown (Fig. 13F, I); pale macula at middle of terga 6–8 of the same size, above 4× broader than long (Fig. 13F). Fore wing infuscate in anterior half and subhyaline in posterior half, veins and stigma pale brown (Fig. 13A). Legs yellowish brown, coxae with black longitudinal stripes ventrally and dorsally, trochanters and femora largely blackish brown (Fig. 13G).

Head. Dorsum of head with indistinct minute punctures, remaining parts smooth with strong luster (Fig. 13B, D). Anterior incision of clypeus small and roundish, labrum small, roundish at apex; malar space about 1.5× diameter of middle ocellus; postocellar area weakly elevated, 2× broader than long; lateral furrows distinct, slightly divergent backwards, anterior part of middle groove distinct; POL: OOL: OCL = 3: 4: 6; head behind eyes weakly enlarged (Fig. 13B, D). Antenna length about 1.5× head breadth, club 1.2× as long as antennomere 3, club breadth about 2.1× apical breadth of antennomere 3, antennomere 3 as long as longest axis of eyes (Fig. 13C).

Thorax. Mesonotum including mesoscutellum densely punctured (Fig. 13E); mesopleuron indistinctly and finely punctured, hardly microsculptured, shiny (Fig. 13H); mesosternum shallowly and weakly punctured. Median mesoscutal groove and notaulus broad and shallow; mesoscutellum roundly elevated without middle furrow; mesepisternum with a distinct oblique carina; cenchri narrow, distance between inner margin of cenchri 2.2× longest axis of a cenchrus.

Abdomen. Abdominal terga finely and densely microsculptured (Fig. 13F). Tergum 1 with lateral carina distinct, posterior corner not produced, posterior margin broadly and roundly incised (Fig. 13F); middle process of sternum 7 broad, basal breadth about 1/3 breadth of sternite 7 (Fig. 13G); apical margin of ovipositor sheath truncate in lateral view (Fig. 13K). Lancet with 51 serrulae (Fig. 13L), middle serrulae distinctly narrowed toward truncate apex with 4–6 proximal subbasal teeth and 3–5 distal subbasal teeth, distance between serrulae about 2.3× basal breadth of serrula (Fig. 13M); lance long and slender, subapical annuli broadened, total length of annuli 5.4× height of 13th annulus, first annulus 1.6× as high as broad (Fig. 13J).

Male. Unknown.

Distribution. China (Liaoning).

Etymology. The specific epithet refers to the last name of Dr. Maoling Sheng, a famous Chinese taxonomist of Ichneumonidae.

Host plant. Unknown.

Asicimbex ulmusvorus (Yang, 1996) comb. nov.

Fig. 14

Agenocimbex ulmusvora Yang, 1996, 23(1): 5–7.

Material examined. 2 females and 1 male, China: Henan Province, 10 June, no other data; 1 female, China, without collection data (ASMN); 3 females and 3 males,

[CHINA: Hubei] Wuhan, 14 April 1990 (2 females and 2 males, kept in NMST, 1 female and 1 male, exchanged specimens, kept in ASMN); 1 female and 1 male, China: Anhui Province, Yuexi, 1983, Guoqing Zhong, Tiying Zhou; 2 females, China: Zhejiang, Lishui, 2–3 April 1981; 2 males, China: Zhejiang, Lishui, 2 April 1979, larvae feeding on *Ulmus parvifolia*; 1 male, China: Zhejiang, Hangzhou, 26 April 1981, Guangwu Li; 1 female, China: Zhejiang, Hangzhou Plant Garden, larvae feeding on *Ulmus parvifolia* (CAF).

Diagnosis. The species is very different from its congeners in the following characters: the body much more slender and largely yellow brown, the dorsum of head without large black macula, the dorsum of thorax with three isolated black maculae, the abdomen yellow, the second tergum black with a transverse middle yellow macula; malar space 1.2× diameter of median ocellus; antenna long and about 1.8× (female) or 2.1× (male) head breadth, the club breadth 1.7× apical breadth of antennomere 3; the abdominal tergum 1 largely smooth and shiny; the middle serrulae each with 2–3 large lateral teeth, and the total annuli length of lance 5.9× height of the 13th annulus.

Description. Not type. Female. Body length 20 mm (Fig. 14A).

Color. Body yellowish brown (Fig. 14A), small macula on bottom of lateral fovea and middle fovea blackish brown, clypeus and mouthparts paler (Fig. 14D); middle furrow of pronotum, three longitudinal stripes on mesonotum (Fig. 14I), mesosternum except middle furrow, broad anterior stripe on mesepimeron, metapleuron largely, middle and hind coxae, trochanters and femora, tergum 2 except middle macula, basal margin of abdominal terga 1 and 3–5, black; antenna dark reddish brown; middle and hind tibiae reddish brown. Wing color as in Fig. 14A, stigma yellowish brown.

Head. Dorsum of head minutely punctured, clypeus smooth, with luster; malar space 1.2× diameter of middle ocellus (Fig. 14D); postocellar area slightly elevated, about 2× broader than long, median furrow weak; lateral furrows shallow and curved, subparallel to each other; POL: OOL: OCL = 3: 5: 7, head behind eyes slightly enlarged (Fig. 14C). Antenna about 1.8× longer than head breadth, antennomere 3 slightly curved, longer than longest axis of eyes (43: 38); club enlarged, widest breadth about 1.7× apical breadth of antennomere 3 and about as long as antennomere 3 (Fig. 14F).

Thorax. Median and lateral mesoscutal lobes with distinct punctures, surface smooth; dorsum of mesoscutellum sparsely punctured; mesepisternum minutely punctured mixed with irregular wrinkles, less shiny, mesepimeron sparsely punctured, shiny (Fig. 14E). Mesoscutellum roundly elevated, without middle furrow (Fig. 14I); mesepisternum with weak oblique carina (Fig. 14E); cenchri elliptical, distance between inner margin of cenchri 2.1× longest axis of a cenchrus (Fig. 14I).

Abdomen. Abdominal tergum 1 smooth, with strong luster; other terga densely and minutely microsculptured, with feeble luster; tergum 1 with broad and round incision, lateral carina low but distinct, anterior corner angulate, posterior corner not produced; subgenital plate strongly protruded in middle 1/3. Lancet with 54 serrulae (Fig. 14L), middle serrulae weakly narrowed toward truncate apex,

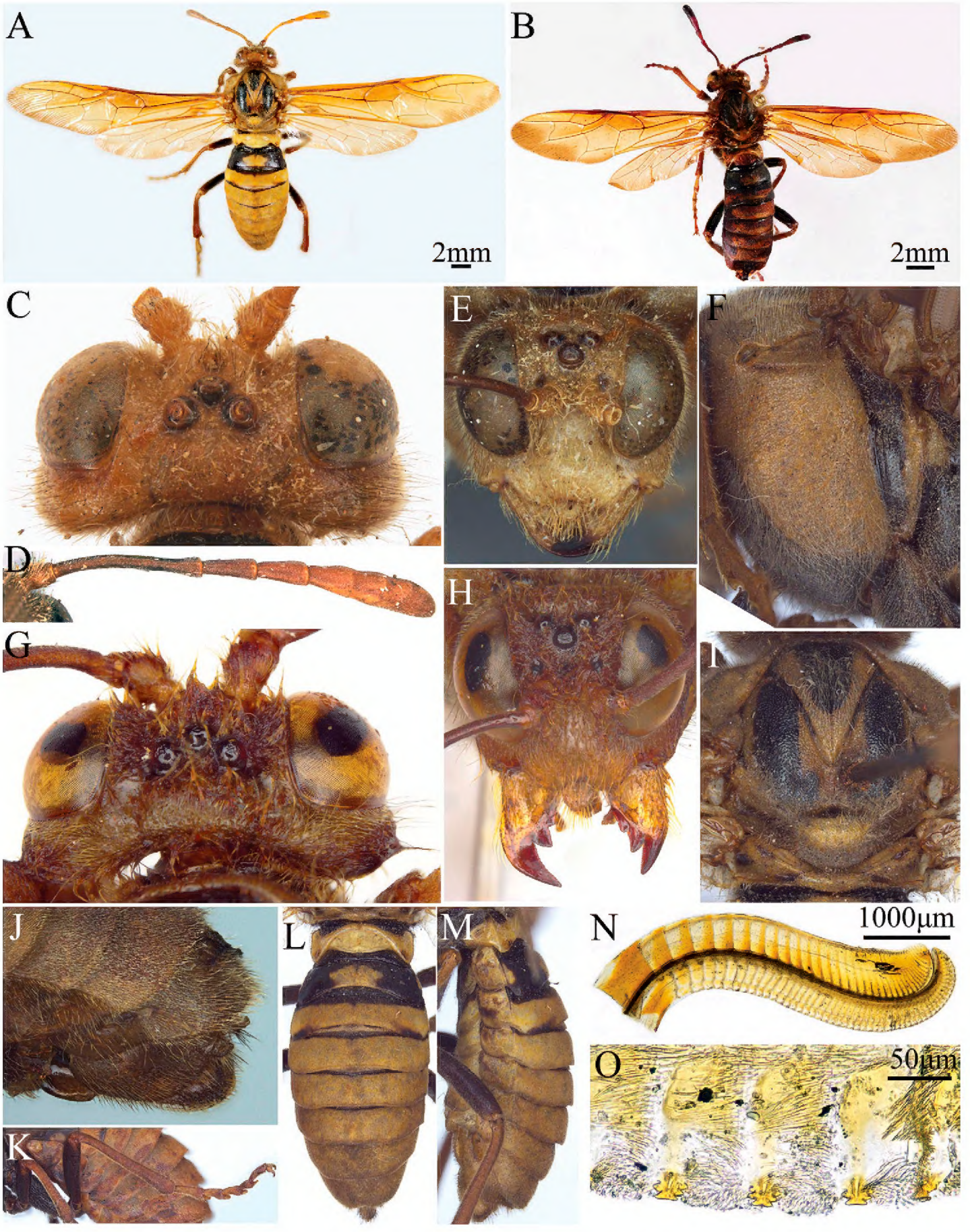

Figure 14. *Asicimbex ulmusvorus* (Yang, 1996) comb. nov. **A** female in dorsal view **B** male in dorsal view **C** head of female in dorsal view **D** head of female in front view **E** mesopleuron and metapleuron **F** antenna of female **G** head of male in dorsal view **H** head of male in front view **I** thoracic notum **J** hind tarsus **K** lateral side of abdomen **L** lancet **M** gonoforceps **N** penis valve **O** middle serrulae.

with 2–3 proximal and distal subbasal teeth, distance between serrulae 1.8× basal breadth of serrulae (Fig. 14O); lance long and slender, subapical annuli broadened, total length of annuli 5.9× height of 13th annulus, first annulus 1.5× as high as broad (Fig. 14L).

Male. Body length 20 mm (Fig. 14B). Body color and structures similar to female except for head hardly dilated behind eye in dorsal view and antenna about 2.1× head breadth; apex of subgenital plate roundish; gonoforceps as in Fig. 14M, penis valve as in Fig. 14N.

Distribution. China (Anhui, Henan, Hubei, Zhejiang).

Host plant and larvae. *Ulmus parvifolia* Jacq. and *U. pumila* L. (Yang and Li 1996). The larva is green with 3 irregular black maculae on each annulus of body except for the last one (Yang et al. 1996).

Distribution of *Asicimbex*

Currently, the known species of *Asicimbex* occur within eastern Asia (Fig. 15). Among them, 7 species are distributed in Northeastern China including Liaoning and Heilongjiang of China, South Korea, Ussuri and Vladivostok of Russia. The remaining 5 species are distributed in Central-eastern China including Shaanxi, Shanxi, Henan, Anhui, Hubei, Jiangsu and Zhejiang. Based on the morphological phylogeny (Yan 2021) and molecular phylogeny (Niu et al. 2022), *Asicimbex* is close to *Palaeocimbex* and *Cimbex*.

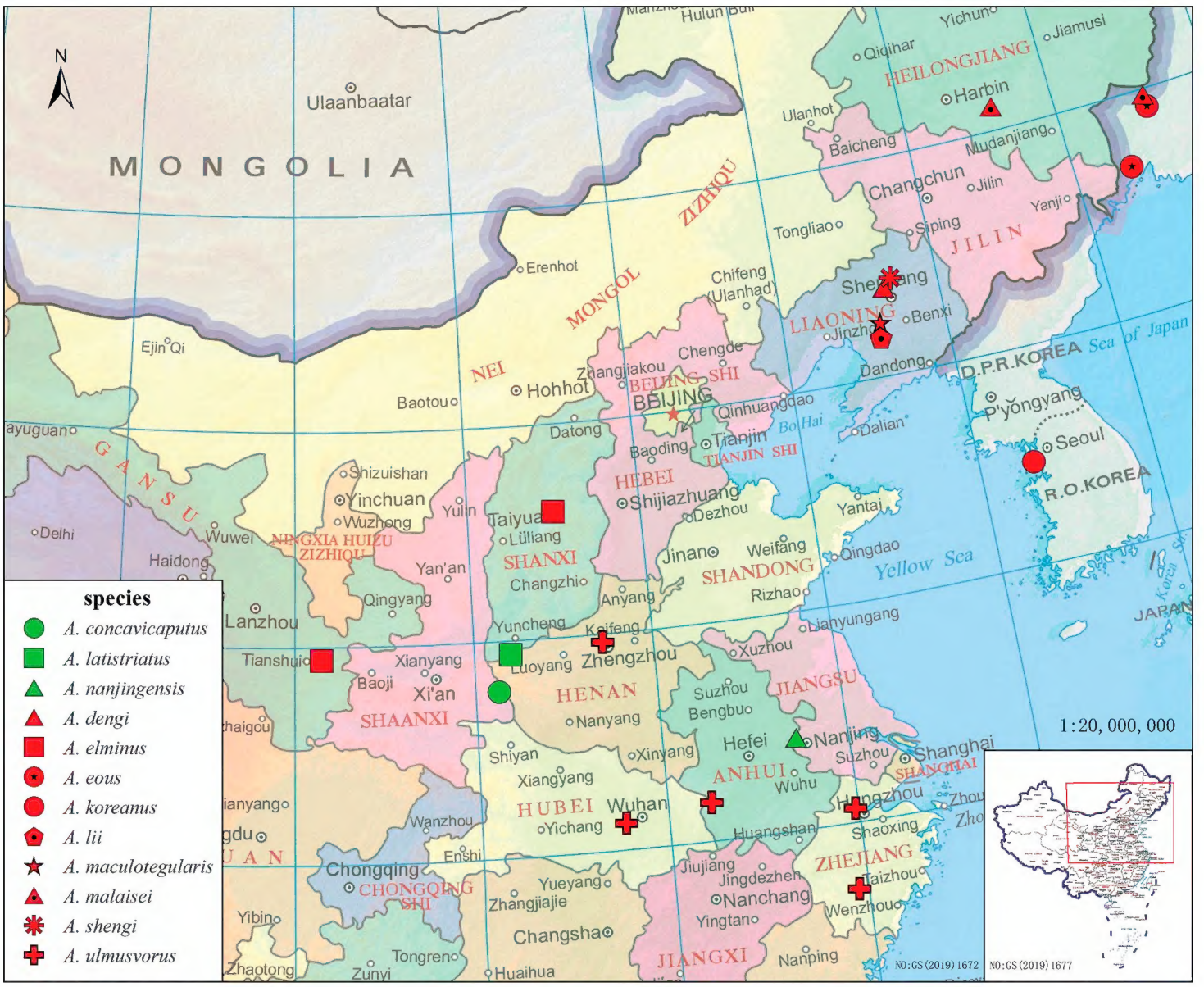

Figure 15. Distribution of all species of *Asicimbex*.

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